RED FLAG CANAL

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Lin Min

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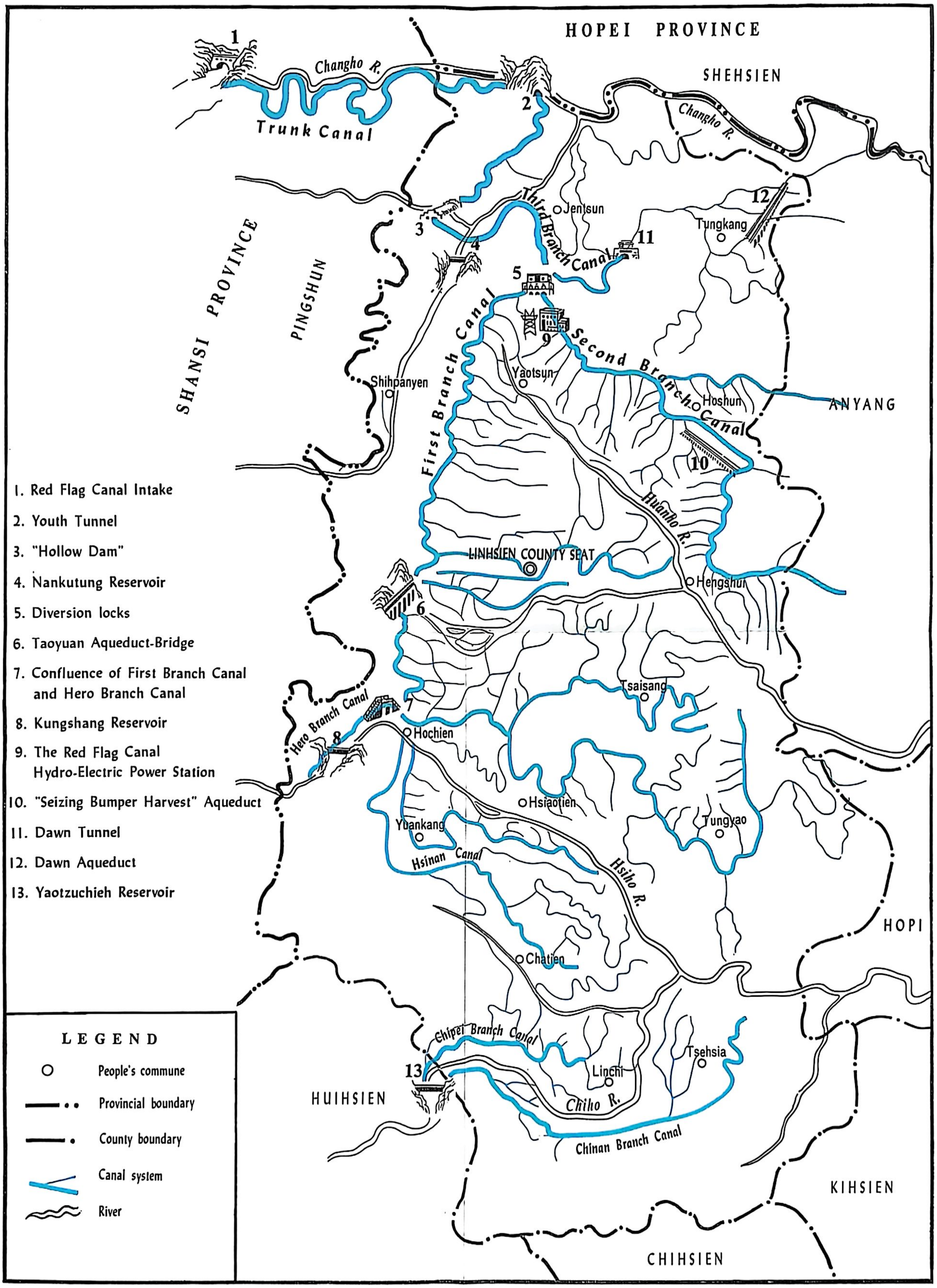
SKETCH MAP OF THE RED FLAG CANAL



1. Red Flag Canal Intake
2. Youth Tunnel
3. "Hollow Dam"
4. Nankutung Reservoir
5. Diversion locks
6. Taoyuan Aqueduct-Bridge
7. Confluence of First Branch Canal and Hero Branch Canal
8. Kungshang Reservoir
9. The Red Flag Canal Hydro-Electric Power Station
10. "Seizing Bumper Harvest" Aqueduct
11. Dawn Tunnel
12. Dawn Aqueduct
13. Yaotzuchieh Reservoir

LEGEND

- People's commune
- Provincial boundary
- County boundary
- Canal system
- River

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Cut through the Taihang Mountains,
Lead in the waters of the Changho,
With aspirations high,
The Linhsien people rearrange nature.

The theme of this song is the Red Flag Canal in Linhsien County, Honan Province.

Mountainous and cut up by gullies, Linhsien used to be an acute water-famine area with thin and stony soil.

In olden times, the saying prevailed, "Mountains do not move and rivers have courses of their own. Nature being what it is, man can do nothing to change it." Man was then the slave of nature, and the labouring people, oppressed and bound under the system of exploitation with its traditional ideology, were in no condition to improve their environment.

Times are different now. With the leadership of the Chinese Communist Party and the guidance of Chairman Mao's revolutionary line, as long as there are people, every kind of miracle can be performed.

"Rearrange the mountains and rivers of Linhsien!" – this was the call to battle issued by the Linhsien County Committee of the Chinese Communist Party. It fired the hearts of the local people. Bravely and vigorously, they

hastened to join the struggle to transform the land. The Red Flag Canal is the first victory in their march to conquer nature.

Construction work on the project commenced in 1960 and was completed in 1969 – taking ten years in all. The entire network consists of a trunk canal, three branch canals and numerous channels and ditches – altogether 1,500 kilometres of waterways. During its construction, the heroic builders blasted or cut into the tops or sides of 1,250 hills, excavated 134 tunnels totalling 24 kilometres, and built 150 aqueducts with a total length of 6.5 kilometres. They handled 16,400,000 cubic metres of stone and earth in the course of construction, sufficient to build a wall 16,400 kilometres long, one metre high and one metre thick. They dammed the unruly Changho River lying northwest of Linhsien, in Pingshun County of the neighbouring province of Shansi, to raise its water level and direct it through the Red Flag Canal to serve entire Linhsien. Along the canal, hundreds of small reservoirs were created, which the local people described as "melons on a long vine." The network can irrigate 600,000 mu of farmland, two thirds of the arable land of Linhsien. The water famine there has become past history.

This man-made river seems to be suspended along the middle of the Taihang Mountains. The imposing trunk canal, its embankments laid with solid stone blocks, winds through the undulating ridges, making a sight comparable in magnificence only to the world-renowned Great Wall. This is, however, a "Great Wall" of unbounded youthful vitality, providing defence against drought which brought misery to the people of Linhsien for so many generations. It is a "Great Wall" that nourishes and protects the luxu-

riant crops in the fields, never failing to ensure bumper harvests for its builders.

The Red Flag Canal has brought tremendous changes to Linhsien.

In the old society, the county was known as a place of "four poors": poor mountains, poor water, poor fields and poor people.

And now? The mountains are green with orchards and woods. Water flows in the canal all the year round. The fields are irrigated, bringing increased yields of grain year after year. The people are well-fed, well-clad and daring in the struggle against nature and all class enemies. In brief, socialist-minded new people creating wealth through their own labour.

The dream of a stream passing around the villages, which generations of Linhsien folk longed to see come true, has at last been realized. With profound gratitude to the Communist Party, they sing,

The Red Flag Canal, wide and long,
Through the Taihang Mountains winds and turns;
Chairman Mao has sent us the water of joy,
So the people have changed their outlook,
And the land its aspect.

A History of Water Famine

Linhsien is situated at the northwestern corner of Honan Province, bordering Shansi and Hopei. The precipitous main range of the Taihang Mountains traverses it on the west and north. A branch sprawls on its eastern and southern parts. Only in the middle part of the county is there a small intermontane basin.

In this mountainous region, the amount of arable land is small in comparison with its population. Moreover, the land, lying in segmented plots along the slopes, was very liable to erosion. The result was poor crop yields; the record was less than 100 kilogrammes of grain per mu. Besides being low in fertility, most of the land before liberation was owned by a few landlords and rich peasants. Mo Chang-shuan, the big landlord of Mulberry Village, then possessed more than 4,000 mu of the land west of the county seat. This bloodsucker boasted, "When I go to town, I don't need to step on anybody's land but my own!" On the other hand, the poor and lower-middle peasants, with little or no land, had to toil for the landlords and rich peasants the year round. They were so ruthlessly exploited and oppressed that a year's back-breaking labour did not even earn them their own keep. Most of the time they had only bran and wild herbs to eat. Such was the feudal system of exploitation and oppression which lasted for more than 2,000 years in old China. It was the fundamental cause of the poverty and backwardness in Linhsien County.

As regards natural conditions, the biggest problem in the area was the dearth of water.

There are several rivers within the bounds of the county, but they all flowed through steep and narrow ravines with only a small capacity for water retention. Rain was their main source of water supply, so there were very big seasonal variations in the volume of water available. The four main rivers, the Chiho, Hsiho, Huanho and Lushui, were all liable to disappear during the dry seasons, but with heavy rain, they became rapidly flowing torrents destroying villages and crops and drowning people. These floodwaters could not be retained, and ran away to waste. Thus the minds of the people were tortured with conflicts. They wished for rain, but at the same time feared its consequences. A folk ballad sings,

When there's drought we long for rain.
But then at last when the rains come,
They wash the topsoil from our fields,
Leaving behind just rocks and sand.

Since that was the way the rivers behaved, the question arose of whether the local people could rely on wells for their water supply. They found the wells a very doubtful source of water at this high elevation because the underground water lay so deep down, and was far from abundant in any case. Wells were drilled in many places to depths of 70 to 80 metres, but water was not reached. Before liberation, only three kitchen gardens were irrigated by underground water drawn from wells. For generations, the local people relied mainly on "rain-water wells" — deep holes dug in the ground and fed by snow or rain.

Out of the 500 villages in the county, 370 had no water sources whatsoever. Irrigating the fields was out of the question. Even water for cooking and drinking and animal stock purposes had to be transported from distances of three to ten kilometres. This gave rise to the local expression, "Drink water from afar." Would rain-water wells help to improve the situation? No, because, apart from the fact that the poor and lower-middle peasants did not have even sufficient land in which to dig a well, no surface-fed well can guarantee a steady supply of water. After a long drought, these wells would dry up just as the springs, rivers and streams did. At such times, people would fetch water in buckets on shoulder-poles or on donkey-back from the distant Changho River.

This was arduous labour traversing mountain trails. One would start out at dawn and arrive back home in the gloom of the evening. Some of the villages, which were too far from water, were deserted during the winter and spring dry seasons. Carrying their small food stores and pots and pans, people would take their families to visit friends or relatives living near water. Some would go to live in caves along the Changho River, staying there until late spring when the farming season began. In old China, it was quite common for poor and lower-middle peasants to leave their homes and go begging during famine years. But the people of Linhsien had one more reason to do so. They had neither food nor water.

With water so scarce, there was a drought nine years out of every ten, and sickness and epidemics were rampant. A glance at the "Linhsien County History" reveals page after page of records of "severe drought," "a year of famine, followed by a year of pestilence," "drought and famine for consecutive years, with instances of cannibalism." In the Hoshun People's Commune, on the Tachu Mountain, a stone tablet was found on which the severe drought of 1877 was recorded, ". . . people kept alive on persimmon leaves and red soil. They sold their daughters for a few coppers. Deep unrest prevailed. What life was like during this natural calamity is engraved here in stone so that all will remember it." This terrible situation is also recorded in the "Linhsien County History." A supplementary note there states, "In the following year, there was no wheat, and epidemics prevailed. As a result, 60 to 70 per cent of the inhabitants died."

While the poor and lower-middle peasants existed in such distress, the landlords and rich peasants lived on a completely different scale. An old Linhsien saying goes,

"In a year of drought, big families get rich." Here "big families" means the landlords and rich peasants, who made more money when drought was at its worst. Owning most of the wells, they used water to pay wages with, and a peasant would have to work one or even several days for the owner of a well in exchange for two buckets of water. The mouths of such private wells were oval-shaped so that water could be drawn only with a specially-made bucket. To ensure that no poor peasant got water without paying for it, the wells were kept covered and locked.

Usury was a common form of exploitation used by the landlords and rich peasants against the poor and lower-middle peasants. They raised their rates of interest in famine years. For instance, 8 measures of grain would be counted as 10 when loaned out. The borrower then had to pay 30 per cent per-year interest on the 10 measures, so that the 8 measures of actually-borrowed grain had to be repaid by 13 measures the next year. With usury so exorbitant, many a peasant family could not meet its debts and had no alternative but to give up whatever little land and shelter it had to the landlord and wander away from the locality.

Landlords and rich peasants were often officials of the local administration. Under the pretext of "promoting local public welfare," they forced every peasant household to pay a levy for "canal construction." But no canal was ever constructed.

The dual tyranny of landlordism and natural calamities broke up numerous peasant families. The example of the Wang family of poor peasants is but one of many. The husband and wife rented a piece of land for farming. There was a severe drought that year, and the land bore no crops. The Wangs had to borrow a few measures of

grain from their landlord. Then, to earn some water for cooking, Wang became a labourer for this landlord. Soon he became ill and lost his "job." After three days at home without food or water, he became desperate and went with a shoulder-pole and two buckets to fetch water from the Changho River. The wife waited in vain for his return, and as night approached she went to look for him. She found the dead body of her husband on a hillside! His shoulder-pole and two empty buckets were beside him.

Before liberation, a ballad popular in the locality ran something like this,

Our mountains are barren, hilltops bare;
More precious than oil, our water is dear.
The landlords' rent makes us despair;
We poor people live with famine and fear.

It summed up the sufferings of the labouring people down through the centuries.

Where there is oppression there is resistance. The history of Linhsien reveals many spontaneous struggles by the peasantry, including armed uprisings on a fairly large scale. One occurred in 1926 at Hsiyu Village. The distressed peasants, armed with hammers and spears, arose en masse, smashing the oval-shaped mouths of the landlords' wells and forcing their way into the granaries of the local despots. They then marched towards the Linhsien county seat. Alarmed, the reactionary rulers quickly mobilized an armed force and rushed to suppress the uprising. The leader of the peasants, a mason named Han, was put to death, and thousands of other poor men were killed. But, the people of Linhsien were not cowed. In the ensuing years, struggles to seize water from the

despots spread far and wide, shaking the reactionary rule of the landlord class.

In the early years of the War of Resistance Against Japan (1937-45), an underground unit of the Chinese Communist Party was formed in Linhsien. Soon afterwards the Eighth Route Army, forerunner of the People's Liberation Army, came to the Taihang Mountains area where Linhsien is situated. From then on the struggles of the people of the county began to have the firm leadership of the Communist Party and develop along the correct line. Local militia and self-defence units were organized. They fought side by side with the Eighth Route Army in guerrilla war, making great contributions towards its success. Not only did the underground organization of the Party lead the people in the national struggle against the Japanese aggressors and in the anti-feudal struggle to reduce rent and interest. It also organized them to open up virgin land and develop production. Thus the war front was supported by the rear and the livelihood of the people improved. In their spare time, the Eighth Route Army men worked to alleviate the critical shortage of water, and, together with the local inhabitants, they started to build a canal – the Resisting Japanese Aggression Canal. However, owing to war conditions, the project could not be finally completed until after liberation, when the agricultural co-operatives came into being. Nevertheless this earlier action vividly illustrates the close ties between the people and the army led by the Communist Party.

In 1944, Linhsien was liberated from the rule of the Japanese aggressors and the puppet government and became a secure revolutionary base.

A new page was thus turned in the county's history.

Channelling the Waters of the Changho River

With the founding of the People's Republic of China, the Chinese people became masters of their own country. Linhsien's problem of water shortage, which had not been solved over the centuries and, indeed, could never have been solved under the conditions of the past, was one of the first to be tackled. Overall improvement could not, of course, be brought about overnight. It was achieved gradually as the socialist transformation of agriculture – the co-operative movement – unfolded in the countryside.

Shortly after liberation, under the leadership of the Party, Linhsien's peasants overthrew the feudal landlords in the land reform and acquired land, draught animals and farming tools. Ridding themselves for ever of exploitation by the landlord class and the rich peasants, they farmed with new enthusiasm. Moreover, led by the Party, they dug a number of rain-water wells and cut channels to bring in water from mountain springs. Many villages no longer needed to fetch water from afar. This saved a lot of labour that was transferred to cultivation of the fields, which heightened production. However, the scattered, individual economy that still prevailed in China's countryside in those days lacked strength to fight against natural adversities. Enough water was now available for household needs, but practically none for the land, and production was hampered by this lack.

Then the peasants organized mutual-aid teams. With groups of some ten families working together, it became possible to dig ponds to hold rain water sufficient for domestic needs and with reserves for use in emergency planting during a drought. As a result, farm output went up further. Although small in scale, the mutual-aid teams displayed for the first time the strength of collective production.

Living experience thus taught the peasants the great significance of Chairman Mao's call, **"Get organized!"** The agricultural co-operation movement grew apace. Within a short three or four years, the mutual-aid teams had developed into advanced agricultural producers' co-operatives, in which the land, draught animals and large farming implements were pooled as collective property. All members worked collectively and shared in the returns according to the work each contributed. These advanced co-ops were already production organizations with socialist collective ownership.

The revolutionary change from private to collective ownership of the means of production threw open new possibilities for water conservancy work in Linhsien. Unified planning, arrangement and allocation of land, funds and labour in the advanced co-operatives, each comprising a few dozen to a hundred households, greatly helped the development of farming and water conservancy. This kind of collective economy was far superior to the individual economy of the period immediately following the land reform. In the days of the co-ops, many deep wells, rain-water wells and ponds were dug, and a number of channels and ditches built to bring in river and spring water. The area of irrigated land rose from 12,400 mu at the time of liberation to 65,000 mu. The people were greatly encouraged by the good results of their collective efforts and became more energetic in the development of water conservancy.

The winter of 1957 witnessed the beginning of the Big Leap Forward in socialist construction throughout the country. In March 1958, Chairman Mao and the Central Committee of the Communist Party formulated the General Line, **"Going all out, aiming high and achieving greater, faster, better and more economical results in building socialism."** This ushered in the high-tide of the big leap.

What should Linhsien start with in its own leap forward? "Water!" – this was the answer of the Party committee and all the people of the county. The committee issued a call, "Rearrange Linhsien's mountains and rivers!" and the work of re-making nature in the mountains began. The first success was the digging of the Hero Canal. In three days, 8,000 people from 138 advanced co-ops along the Hsiho River south of the county seat arrayed themselves over a ten-kilometre stretch. Their mobilization demonstrated the superiority of the socialist system and the power of the peasants organized into co-operatives. It was the first fierce fight waged by the people of Linhsien against the Taihang Mountains. They blasted out huge rocks, filled in ravines, laid roads, constructed bridges to make the canal. This battle lasted six months and ended with a guarantee of a water supply to irrigate 100,000 mu of land. It created growing enthusiasm for large-scale water conservancy projects.

The coming into being of the people's communes opened up boundless new vistas for such endeavours.

In 1958, the year of the Big Leap Forward, more than 400 advanced agricultural producers' co-ops in Linhsien were merged into 15 people's communes. This new form of organization, which integrates government administration with commune management and is bigger in size and of a more developed socialist nature than the advanced

co-ops,* at once demonstrated its power. Immediately following the completion of the Hero Canal, the communes supplied a labour force of 40,000 for the construction of the large Yaotzuchieh, Kungshang and Nankutung reservoirs on the upper reaches of the Chiho, Hsiho and Lushui rivers, which have their sources in the Taihang Mountains in western Linhsien County. It did not take this powerful labour force long to complete these three big reservoirs. In fact, they built over 30 smaller ones at the same time. In past rainy seasons, the water in these rivers would all run to waste, washing away soil and inundating fields along the lower reaches. Now the floodwaters, retained in the reservoirs, are used for irrigation. And soil erosion and overflow are averted.

The Hero Canal and three big reservoirs present a scene moving in its grandeur and beauty. Seeing these fruits of their own labour and anticipating bumper harvests, the people of Linhsien were filled with pride in their achievements in conquering nature.

With these projects, plus the small ones earlier carried out by the co-ops, the county Party committee and the people thought they had brought the situation pretty well under control. Little did they expect what happened when serious drought hit the area in 1959. The canal

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* The people's commune is at once the grass-roots organ of state power in China's rural areas and an organization for collective production. This is referred to as "integrating government administration with commune management." A commune is generally a merger of 30 to 40 advanced co-ops and has a higher degree of public ownership of the means of production. Apart from ownership at the production team level, which is the basic form, there is also ownership at the level of the production brigade (corresponding to the former advanced co-op) and at the commune level. This is why the communes are described as "bigger in size and of a more developed socialist nature" than the advanced co-ops.

went dry, the reservoirs retained only a little water, and the people had to face another crucial test.

Did this mean that all their efforts had been in vain? Not so. As the saying goes, "A fall into the pit is a gain in your wit." Through the years of battle against nature, the county Party committee and the people gradually acquired a deeper understanding of her ways. Though the problem of water supply had not yet been thoroughly solved, they were becoming bolder and more certain about what to do. They came to realize that in Linhsien it was impractical to rely on rain and underground water for successful irrigation. It was necessary to both retain and channel water. But the rivers within the county suffered drastic seasonal changes which rendered them undependable as sources of water. Water had to be channelled from elsewhere.

Tempered by experience, the builders grew firmer in struggle and more accomplished technically, and the prospect of carrying out large engineering projects no longer awed them. They were confident that the Hero Canal and reservoirs already constructed would not remain useless for long. Once a dependable water source was found, they would "come alive" again.

But where to obtain the water? People naturally thought of the Changho River, where they always went for it in times of drought.

The river, reaching Linhsien from Pingshun County, Shansi Province, rushed eastward over the precipices and through the ravines of the Taihang Mountains along Linhsien's northern border. Its flow was regular and abundant. If its water could be diverted through the northwestern corner of Linhsien and made to serve the entire county, the problem would be settled. But with a barrier

like these rugged ridges and ravines, was the idea feasible?

This was discussed at a meeting lasting several days, which was attended by Yang Kuei, secretary of the county Party committee, and its other members. Some expressed misgivings, saying, "It's such a gigantic job, yet we have no investment from the state, no machinery, no water conservancy experts. With only the resources of our own county, it's impossible." But the majority thought otherwise. They admitted there would be difficulties. But, they argued, what was inconceivable under the individual economy in the early years of liberation and immediately after the land reform had now become possible under the people's communes. The power of the collective economy and the heightened political consciousness and enthusiasm of the commune members made things very different from what they had been a decade previously. Besides, they argued, water was the unanimous demand of the people of the whole county. Difficulties, no matter how formidable they might seem, could be overcome, if the county Party committee gave the correct leadership, had confidence in the masses and encouraged them to bring their revolutionary fervour into full play. In support of their argument, they cited the completion of the Hero Canal and the three big reservoirs.

Further discussions ended with unanimity of opinion among the members of the county Party committee. They then went individually among the people to find out the general opinion on the matter. The common reaction was, "We should have done this earlier. It's better to work hard than to suffer endless hardships!"

Acting on the will of the people, the county Party committee made the decision, "Slash through the Taihang

Mountains and channel the Changho River throughout Linhsien!"

Under the direct leadership of the county Party committee, a "three-in-one" survey team was set up, composed of peasant workers, cadres and technicians, numbering about 30 in all. The general designing of the new project was entrusted to Communist Youth League member Wu Tzu-tai, who had just graduated from a water conservancy technical school, together with some skilled masons rich in experience of road and bridge building, and several cadres. They went off to the mountains to map out the canal course. After a time their hands were badly cut and scratched. Their feet blistered, and their clothes tore on the rocks, but they did not retreat nor relax their efforts. These persevering "reconnaissance groups" knew that the fruition of the cherished hopes of 700,000 Linhsien people depended on their efforts, not a light burden of duty. They knew that the project would benefit all posterity and treated every detail as important. The canal course was surveyed not once, but many times, and each item of data was the result of repeated computation and verification.

After 60 days and nights of arduous work, they presented the county Party committee with a rough blueprint. It featured a canal with a carrying capacity flow of 25 cubic metres per second and an irrigation capacity of 470,000 mu. Other points in the plan were: the canal was to start at Houpituan in Pingshun County of Shansi Province; from there a trunk canal was to be built to channel water from the Changho to Fentou Ridge in the north of Linhsien County; at Fentou Ridge, a high watershed, a sluice gate would split the trunk canal into three branch canals. The First Branch Canal would run south-

On the way to the worksite

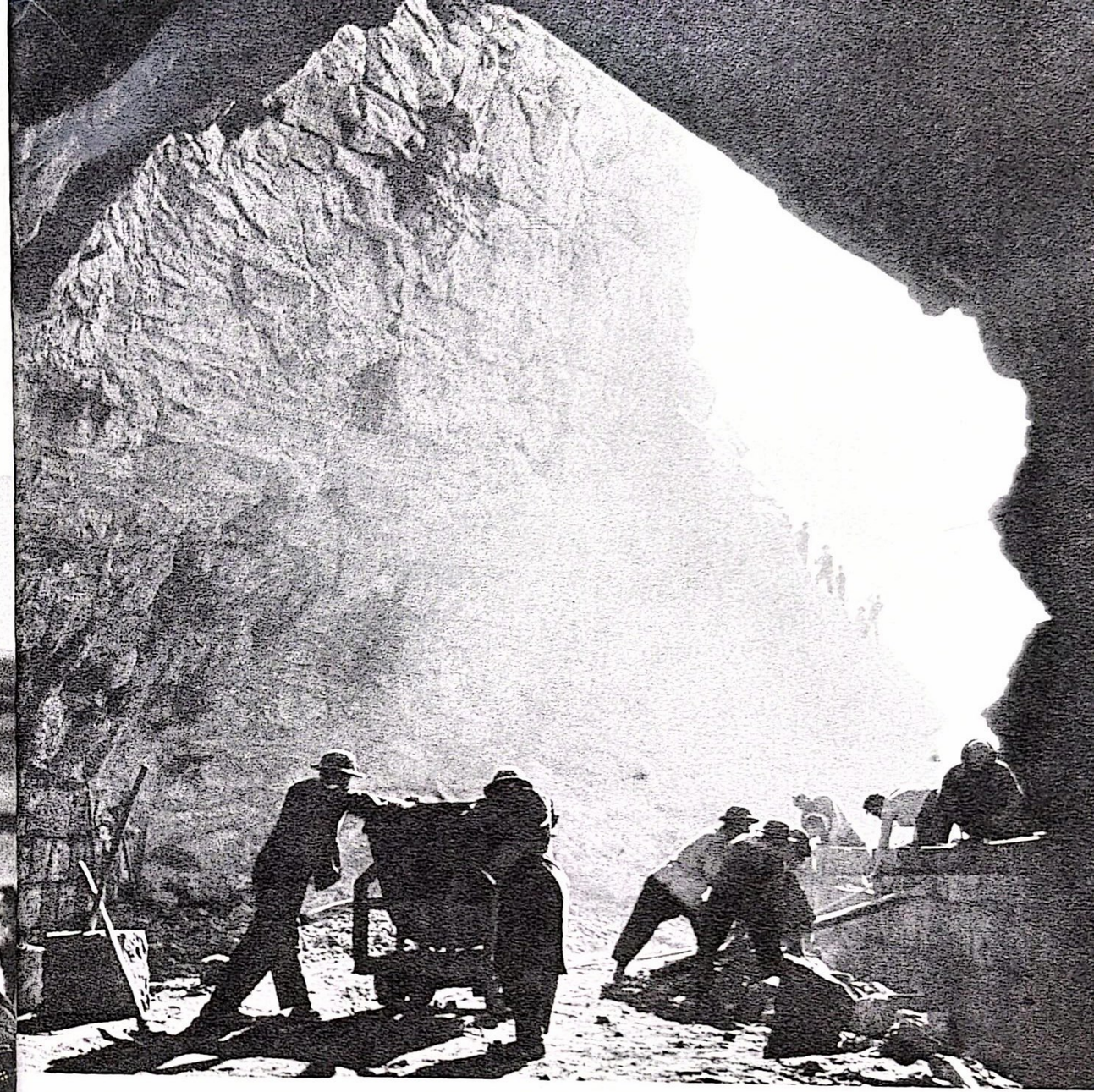
Opening up the towering Taihang Mountains

Cutting a bed for the canal

Dislodging loose rocks to safeguard the work

Jen Yang-cheng, who led the "airborne" rock-dislodgers

"Iron Girls"



Tunnelling through the mountains

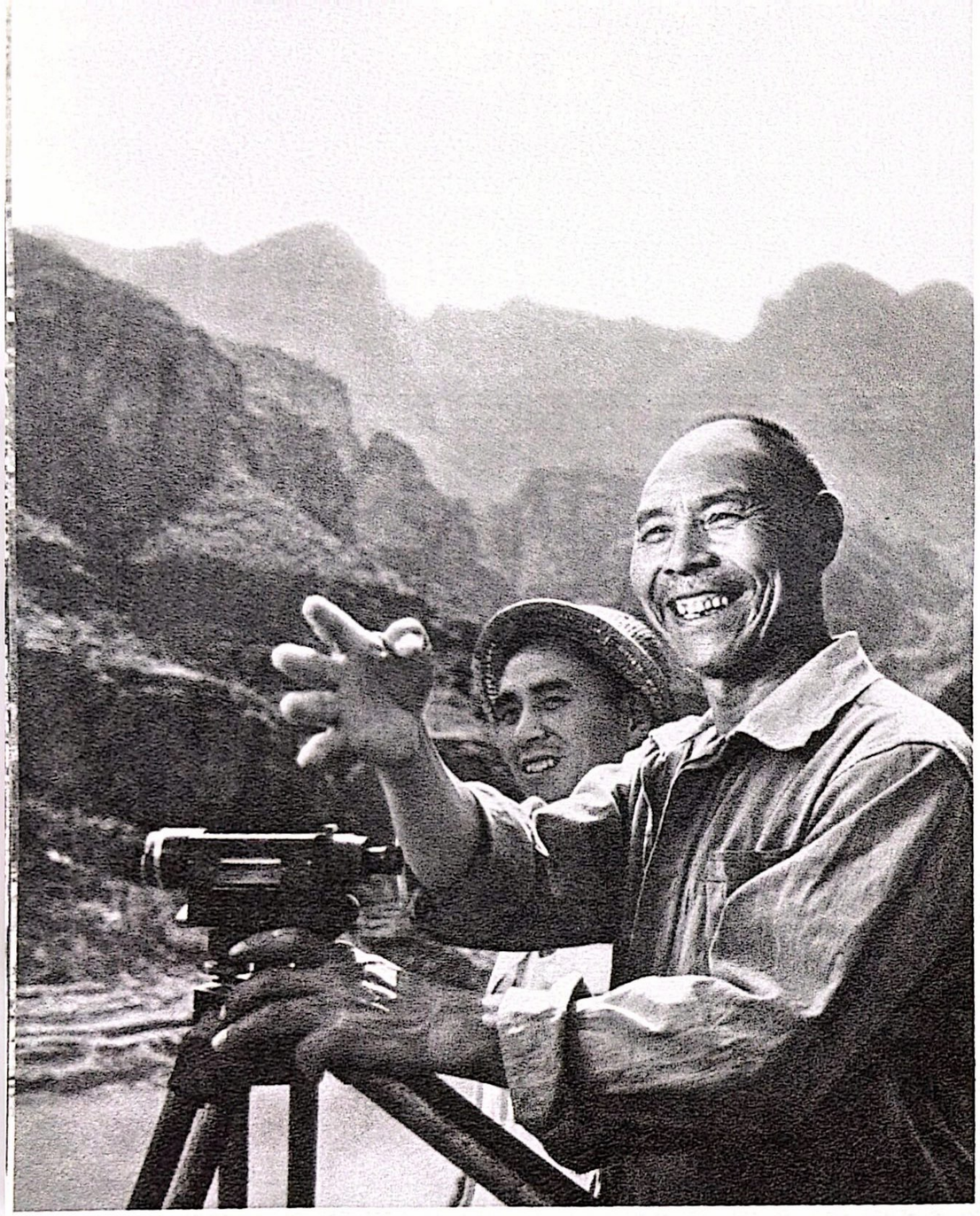
Building an aqueduct with local materials and methods

Linhsien County Party Committee secretary Yang Kuei (centre front) with the masses

Ma Yu-chin, deputy director of the project, wielding a sledge hammer to make a blast-hole

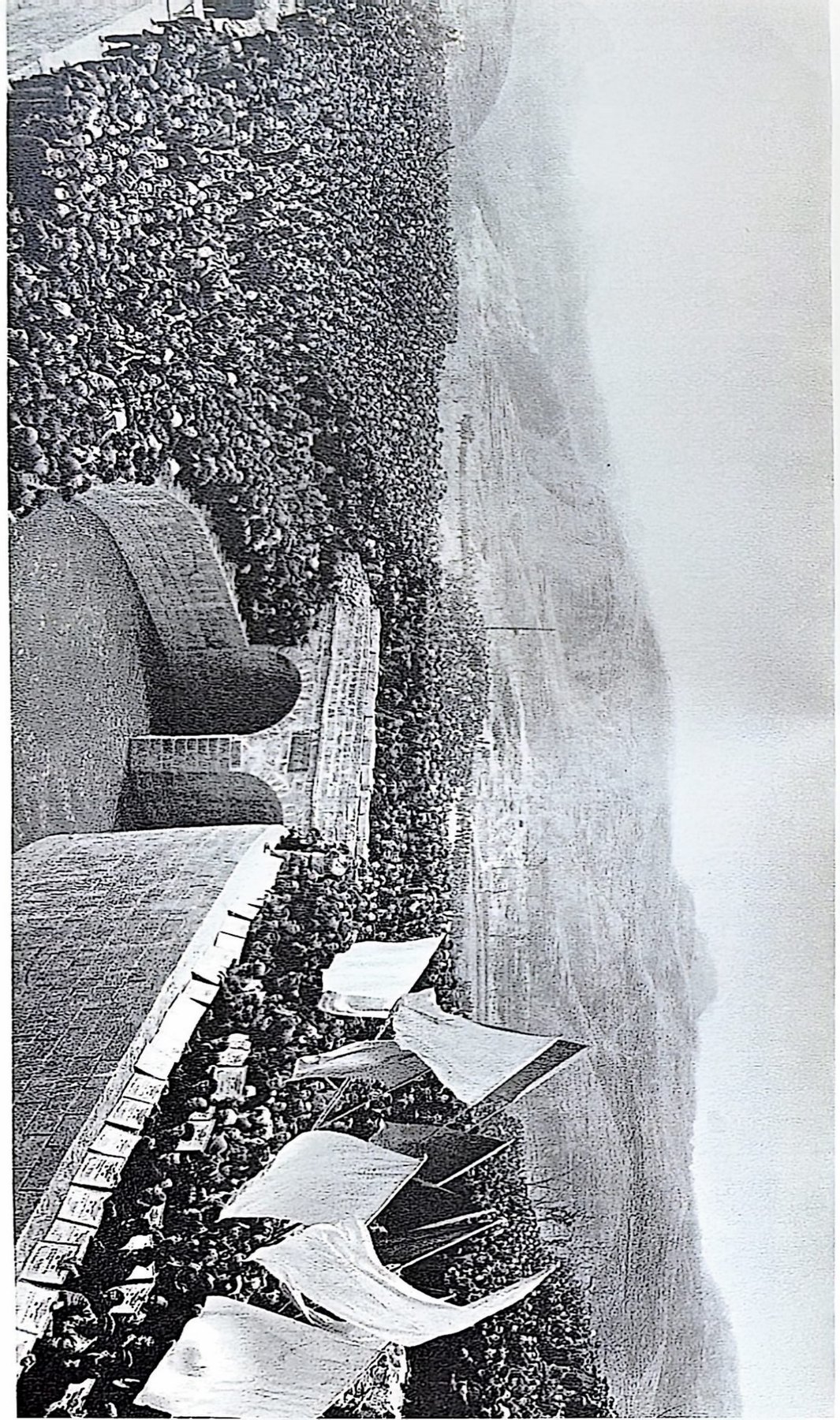
Reservoir worksite

Wang Shih-tsun (standing), tunnelling expert, joins peasant builders in study of Chairman Mao's works



Peasant water-conservancy technician Lu Yin

"Barefoot doctors" at one of the sites



The people of Linhsien County celebrate the grand opening of the Red Flag Canal

ward along the mountains on the west side of the county to meet the Hero Canal; the Second Branch Canal would run eastward along the northern mountains and then turn to the southeast; the Third Branch Canal would run northeast from the rear of the high watershed at Fentou Ridge. To each of these branch canals would be added channels, runlets and ditches. The new canal plus the old canal, reservoirs, rain-water ponds and wells would constitute a whole new system, properly combining irrigation and drainage, and basically changing Linhsien's situation.

It was an ideal plan, and a bold one too! This one project would bring water to half of the arable land in the county and also ensure a water supply to the old projects. The next step was to decide how it was to be carried out. Should they depend on the state for everything, or should they rely on their own resources in carrying out this mammoth project?

"On what basis should our policy rest? It should rest on our own strength, and that means regeneration through one's own efforts." This teaching of Chairman Mao's was very much in the mind of the county Party committee secretary Yang Kuei. He recalled a lesson he had learned in the past. It was during the spring of 1956 when the Hero Canal had just been started. The county Party committee lacked deep understanding of Chairman Mao's great policy of **"self-reliance"** and relied passively on the state to finance the entire project. When one third of the canal was completed, the state investment of 160,000 yuan was exhausted, and the job had to stop. During the ensuing Big Leap Forward, the county Party committee changed its policy and decided to rely on the masses who would build the canal with their own strength. Within half a year the project was finished. Remembering

Chairman Mao's teaching and bearing their own experience in mind, Yang Kuei and other members of the county Party committee came to a unanimous conclusion: No matter how big and difficult the project might be, the county should act according to Chairman Mao's teaching on self-reliance and arduous struggle and rely mainly on itself instead of depending passively on the state. This was not a matter of funds alone. It was a matter of policy, of principle, of ideology and of whether one had the revolutionary spirit.

They again went among the masses seeking their opinions. Here are the questions they asked and the answers they received:

"Can we get enough people to do the job?"

"We can indeed! There are nearly 4,000 production teams in the county, and if each team provides two or three people to work on water conservancy, that will mean about 10,000 people. Their withdrawal from actual farm work will have little effect on production as the others can easily take over what is required to be done. Just think of the workdays wasted on fetching water from far away places! They total more than three million every year, equivalent to the full-time labour of 10,000 people. Imagine how much man-power will be saved when we have solved this water problem."

"How about the funds?"

"No need to worry. We have people's communes now. They are bigger and economically stronger than the co-ops. It's not much of a problem for the communes to find the needed investment. They have many ways of raising the necessary funds. Sell more surplus grain to the state, that's one way. Construction teams can go away during slack seasons to work in other places, that's another. And we can also increase our income if we do our farming better. We ought to build the project through our own efforts. If not, what sort of self-reliance will that be?"

"And the building materials?"

"We have all the rocks on the mountains at our disposal, and there are many stone masons around. We can line the canals and build bridges with local stone, and save the reinforced concrete to build some big factories later on."

"How about the expertise?"

"What does that amount to? The job is just dynamiting, bridge building and tunnelling. We mountain people have a good working knowledge of these processes. It's true that some expert knowledge is required, because this project is meant to be permanent and quality is very important. But we can learn by doing what we don't know. In the old days we peasants didn't know a thing about fighting a war. But we learned that through fighting and won the War of Resistance Against Japan and the War of Liberation! Now we are working for socialism under the leadership of the Communist Party and Chairman Mao. Why can't we overcome the difficulties in our way? If we just put our heads together, there will be no limit to what we can do!"

The daring spirit and iron will expressed in such plain language by the masses deeply moved the members of the county Party committee. They were encouraged by the people's high enthusiasm for socialism, felt impelled to go forward and all the more resolved to stand worthily at their head and lead them.

Battling with the Taihang Mountains

In February 1960, the county Party committee issued the call: "Start work on the project!"

Early in the morning, peasants set out from the villages in columns for the head of the projected canal, in the northwest of the county.

All the peasants over 20 years of age were familiar with this path, for it was the one along which their forefathers and they themselves had fled from famine in those long, bitter days of the old society. It was a path strewn with the white bones of refugees killed by starvation. Helpless and without hope, they had left their homes and taken this road of endless hardship and misery. Supporting the old and carrying the young, they had trudged along in twos and threes, their small bundles of possessions slung across their shoulders. Many of them fell, never to rise again. The living buried their dear ones after digging graves with their own hands. Many were those who left their native place by this path, never to return. . . . It evoked many bitter memories. These common memories awoke a common determination – to build the canal.

Tens of thousands of builders marched with firm step along this mountain path. Heading them were the leading members of the county Party committee, bearing red banners and carrying tools. All this reminded people of the Eighth Route Armymen who fought in this area during the War of Resistance Against Japan. Roadside tea stands and propaganda groups cheered the builders all along the route. Teams of young people singing stirring songs to the quick clickety-clack of bamboo castanets heightened their spirit. The builders were bubbling over

with joyous anticipation, and the hills echoed back their songs and laughter.

Posted everywhere on the rocks were pledges written by the builders. These pledges embraced one simple theme: They would never leave the mountains until the canal was dug.

Someone had splashed a huge slogan in red paint on the steep cliff: **"Transform China in the spirit of the Foolish Old Man who removed the mountains."**

This was a quotation from Chairman Mao's comment written in the autumn of 1957 on a report on an agricultural co-operative's success in transforming nature. Long before, in 1945, Chairman Mao had written the article **"The Foolish Old Man Who Removed the Mountains."** It cited an ancient Chinese fable about an old man, known as the Foolish Old Man, who decided to dig up the two big mountains obstructing the path beyond his doorway with the help of his sons. A conservative greybeard known as the Wise Old Man advised him not to try the impossible. But, unshaken in his conviction, the Foolish Old Man went on digging. In the end, said the fable, God was moved by this, and he sent down two angels, who carried the mountains away on their backs. Likening imperialism and feudalism, which then weighed on the Chinese people, to these two mountains, Chairman Mao told China's Communists, **"We must persevere and work unceasingly, and we, too, will touch God's heart. Our God is none other than the masses of the Chinese people. If they stand up and dig together with us, why can't these two mountains be cleared away?"** Since then, "The spirit of the Foolish Old Man" has become a synonym for indomitable revolutionary spirit. It animates the Chinese

people in their triumphant march forward in socialist revolution and socialist construction.

The general headquarters of the project was in a village on the southern bank of the Changho River, with Yang Kuei, secretary of the county Party committee, in charge of the work.

There were few villages along the river banks or in the mountains, and the sudden advent of over 30,000 people presented a big housing problem. The builders put up sheds and dug caves to live in while on the job. Some of the more robust young people bedded down in nooks and crannies in the cliffs. It was early spring, and chilly winds still whipped the Taihang Mountains. But the builders were burning with enthusiasm and took no heed of the cold.

Transport was difficult on the steep, narrow mountain path, so headquarters issued instructions to construct a simple road 70 kilometres long to the head of the canal. It was completed in seven days and nights. Every means of transport available in the county was used to carry grain, vegetables, tools, dynamite and other materials to the front-line day and night. The army of builders spread out along the route of the 70-kilometre-long trunk canal. The battle to split the mountains and channel the waters began.

What tools did they use? Just hammers and steel drill rods. One peasant would hold a rod while another swung a heavy sledge hammer, striking it in a steady rhythm. When a small hole had been made in the hard rock, it was loaded with explosives and blasted to become a large one. Cut, blast, cut again, blast again, and so it went, on and on. In the meantime, with hammers and chisels, the builders chipped the rocks blasted out of the

mountains into rectangular blocks, providing ideal building material for canal embankments and aqueducts.

True, the weapons the peasants used to conquer the Taihang Mountains were very simple, but as Chairman Mao points out, **"the outcome of a war is decided by the people, not by one or two new types of weapon."** It was precisely with such simple weapons that the people of Linhsien, who were determined to build socialism and change the feature of the county, split open one mountain peak after another.

The task was, of course, an arduous one. The 70-kilometre-long trunk canal alone had to skirt along 51 cliffs, and every inch of the canal was cut through the rocky hillsides. Many unforeseen difficulties were encountered. The county Party committee had planned to finish the work in 80 days and officially open the canal to use on May Day. They thought that quite feasible, by mobilising 100,000 peasants and every one of them digging out a mere metre. But when the number was around 37,000, the road became jammed with people and carts, and it became very difficult to get on with the work. As the battle line was so overextended, many problems cropped up. There was great difficulty in getting materials to the right place and in time, and there were not enough technicians and administrators to direct the work. On some sections, work was actually held up for this reason. Some people even dug in the wrong places. Little headway was made on the project during the first 20 days. How could the problem be settled?

The secretary of the county Party committee Yang Kuei soon called an enlarged meeting of the Party committee of the general headquarters and also a meeting of the builders' representatives for a round of discussions. They

decided to shorten the battle line and act according to Chairman Mao's teaching: **"Concentrate a superior force to destroy the enemy forces one by one."** The project was to be constructed section by section, the first phase being the completion of the 20-kilometre stretch in the neighbouring province of Shansi. Man-power, materials and expertise were to be concentrated, and those leading the work must stay close at hand at all times to give guidance. Meanwhile, these leaders and the masses had begun to take a long-term view of the project. If it could not be completed in one year, they would work three, five, eight or even ten years until a man-made river existed on the Taihang Mountains for the benefit of the people of Linhsien. Keenly aware that it was the Three Red Banners – the Big Leap Forward, the People's Commune and the General Line – which gave them strength, courage and confidence, they decided to name the project the Red Flag Canal.

Over 30,000 builders massed along the 20-kilometre-long route of the trunk canal in Shansi Province, and an intense battle ensued. Divided into various special teams, they launched a grand attack on the Taihang Mountains. The blasters drilled holes with hammer and rod and blew up rocks. The men engaged in removing dangerous rocks hung on ropes down the face of cliffs, swung out high above the valleys and then pivoted inwards to pry out and dislodge those rocks with steel spikes. Transport personnel carried water, sand, stone blocks and other materials. Masons set stones and spread mortar to build the embankments. Overhead cables rapidly shuttled baskets of materials between the mountain slopes and the river banks. Light railways were built along the canal route, and tipcarts loaded with materials or rocks slid swiftly over them. Deafening explosions rent the air. Clouds of

acrid smoke billowed over the worksite. The sounds – of people, barrows and tipcarts, of metal striking against rock, of explosions, of the wind and torrent, of words and music from the worksite loudspeakers – blended into a magnificent battle symphony ringing through the age-long quiet of the Taihang Mountain valleys.

The "battle of annihilation" went well. Everything was in proper order. The quality of work was good, and work efficiency was high. Before many days had passed, many sections of the embankments were linked up and the rough outline of the canal took shape. With heightened revolutionary fervour, the builders attacked the "fortresses" along the route.

At the head or intake of the canal, the builders began sealing the gap in the dam. But the water flowed here with such speed and power that baskets of stones, sacks of sand and even rocks weighing 100 kilogrammes were swept away. The high water season was approaching. It would soon bring torrents rushing down from the upper reaches of the river and cause a swift rise in the rate of flow – by hundreds and even a thousand cubic metres per second. This would not only make it impossible to seal the gap, the unfinished dam itself could be battered down. So the job had to be completed before the high-water season started. What was to be done? "Jump into the water and slow down the flow!" someone shouted. Scores of people responded to this call, locking their arms to hold back the swiftly flowing water. One line of people was not sufficient. More people leapt in to form second and third lines. The rolling waters were subdued by these iron-strong walls, and the rate of flow reduced. Stake after stake was driven in. The people on the banks hastened to fill the gap with sacks of sand, each weighing

up to 150 kilogrammes. Three hours of hard struggle, and it was successfully sealed off by countless sacks of sand and baskets of stones.

On the cliff face, men were descending by ropes tied around their waists. Hanging in mid-air and catching toe-holds in the crevices, they drilled holes with hammers and rods, then blasted the rocks to make a working face. There were times when they had to deal with overhanging cliffs. As they could not reach underneath these by a direct drop, the rope had to be let down gradually. A signal from below, and the people on the ridge would lower it. Each time the suspended men touched the wall of the cliff, they pushed off with their feet and swung out. Then, swinging back, they again pushed off and swung further out. Each time, the rope was let out, and they swung ever wider until they were well over the Changho River. Then, in the final swing, the momentum carried them to the concave section of the cliff, where they hooked themselves to the face with steel spikes and quickly inserted iron bars into the crevices. And, sitting on these bars, they began to drill blast-holes into the rocks. . . .

The battle of Hengwu was indeed a tough one. Three towering cliffs, situated south of the Changho River, between the confines of Linhsien County and the neighbouring province of Shansi, completely blocked the advance of the canal. White clouds girdled the cliff-tops, and surging waves billowed at the builders' feet. A sudden gale from above could blow rocks and trees over. To lead the canal into the county, it was necessary to split these cliffs and cut into their faces. General headquarters selected 5,000 strong men for this job and put one of its leading members in charge on the spot. The work began with the drilling of blast-holes. Many rods were worn down, and

many hammers broken. But pitting their will against the unyielding rock, the builders pressed on until the crests and faces of the cliffs were riddled with holes. They then inserted and fired the dynamite. Huge rocks plunged into the Changho River amid the deafening sound of explosions and heavy clouds of smoke.

This is how the Linhsien people, of that heroic mettle which can move mountains and drain seas, and with the selfsame determination and perseverance as shown by the Foolish Old Man, built this man-made river in the splendid age of the people's communes.

Advancing Through Difficulties

In the early sixties, China went through temporary economic difficulties caused by blockade and sabotage by the Soviet revisionists and three years of serious natural calamities. It was during this period that the Red Flag Canal project was started.

The dam on the Changho River and the 20-kilometre section of the trunk canal leading from the dam to the border of Linhsien were completed in the autumn of 1960. The county Party committee organized a mass meeting to celebrate the opening of the canal. When the sluice gates were raised, the water from the Changho River poured into the 8-metre-wide, 4.3-metre-deep canal which wound along the mountainside. The people became wildly excited as they watched the roaring water advancing to fill the empty channel. The water they had expected for so long was at last flowing to the very threshold of their county. The job now was to intensify their work and bring the water to their own homes. With redoubled

efforts, the army of builders began to dig the remaining 50 kilometres of the trunk canal.

While the people were plunging into this new battle with greater determination and higher enthusiasm, Liu Shao-chi and his crew were rabidly exaggerating the temporary economic difficulties and pushing the revisionist line. They arbitrarily ordered that the project be stopped, and castigated the people of Linhsien for "stubbornly clinging to the Red Flag," "building such a big project when the country is in serious difficulties!"

After the issue of this order, a handful of class enemies reared their heads. They spread slanders about the project, saying that the building of the canal had not been undertaken at the request of the people and that the Linhsien County Party Committee was not concerned about the people's hardships. They charged it with just showing off and wasting much manpower and money. They also sent anonymous letters to intimidate the leading members of the county Party committee. One bourgeois Rightist went so far as to send a letter of "accusation" against the county Party committee to Peking.

In truth the members of the Linhsien County Party Committee were good leaders of the 700,000 people living in the area. When Liu Shao-chi's reactionary line threatened to engulf the people of Linhsien like a swelling tide, the committee members repeatedly studied the works of Mao Tsetung, which are a telescope and microscope of Marxism-Leninism, to distinguish the genuine and correct from the false and wrong. The study enabled them to see clearly what was happening. Chairman Mao had pointed out much earlier, **"Water conservation is the life-blood of agriculture."** The Party Central Committee had also called for the building of water conservancy projects in a big way. In seriously water-scarce mountainous areas like Linhsien, it was particularly important to build a number of water conservancy projects quickly, well, and in an economical way. In relying on the strength of the collective economy of the people's communes and of the people of Linhsien to dig the Red Flag Canal, the county Party committee was following Chairman Mao's revolutionary line and the directives of the Central Committee of the Party. There was nothing wrong with that. True, the country was experiencing temporary difficulties, but their emphasis had been on self-reliance. What kind of self-reliance would it have been if they had stopped doing things just because the country was encountering certain difficulties? Under these circumstances it was important to work all the harder and strive to support the state by producing more grain and developing the collective economy. How could they do that if they abandoned the project that would bring water to the land? It was clear that they had to stand firm in the face of this evil wind!

Bearing the "stop-work order" issued by Liu Shao-chi and his gang, the leading cadres of the county Party committee went to the production brigades to hear what the people had to say. Here is what they heard:

"There are difficulties of many kinds, but the worst is to live without water generation after generation. We have asked for water for a long time and at last the Communist Party is leading us in the digging of a canal. If we do not carry on, won't we all turn into 'wait-and-do-nothingers'? What is there to wait for anyway? For the state to pay out relief to us, or for new droughts to crush us?"

"A weak will is a worse enemy than the hard rocks!"

"We're ready to surmount any difficulty and correct any shortcoming. But nothing on earth can make us relinquish the Red Flag!"

After finishing their round of the production brigades, the leaders of the county Party committee were more sure of themselves and felt revitalized. Proceeding in the Communist Party spirit, and without thought of self, they resolutely resisted the wrong line advocated by Liu Shao-chi.

But at that time, Liu Shao-chi and his gang were still usurping a part of the power, and, under their relentless pressure, the county Party committee had to adopt a flexible way of struggle. The Red Flag Canal project was officially declared "suspended," and the majority of its peasant builders were sent back to their villages to cultivate the land. In reality, the work went on. A crack force remained to excavate tunnels under the guise of "looking after" the finished part of the canal and taking care of the tools.

The Youth Tunnel was the longest on the project, and the toughest to excavate. It was known as the "throat" of the trunk canal. Unless it was completed, the whole canal would come to nought. The task was given to a shock brigade of 300 young men and women. The rock to be pierced was granite, almost as hard as iron. One blow on the pointed steel drill rod with a sledge hammer and the only impression made was a white mark. The rods were blunted after a few blows and had to be resharpened in the worksite smithies. Sometimes it took half a day to drill one blast-hole. The rods were worn short, but the revolutionary will of the young people grew in strength.

At first, the digging proceeded from the two ends of the projected tunnel. To speed up the work, 20 brave young men, suspended by ropes, worked on the cliff face, opening five partial side tunnels through the cliff and increasing the work-faces to 12 in place of only two. This also solved the problems of ventilation, dispersal of smoke, lighting and disposal of excavated rock. The builders searched hard for better blasting methods and invented one known as the "triangle charge." This involved drilling three holes in triangular pattern, with one above and two below, placing explosives in them and so blasting out big pieces of rock, one to two metres wide and of considerable thickness. From this, some other methods of blasting were evolved. Thus the speed of tunnelling was greatly accelerated; the daily record leapt from 13 centimetres to 2.8 metres.

The task was an arduous one, and the living conditions were poor, but these young people were always in high spirits, singing all day long. Displaying the spirit of the Foolish Old Man who removed the mountains, they worked with hammers and steel drill rods day in and day out, finally excavating a tunnel 616 metres long, 5 metres high and 6.2 metres wide through the granite cliff. It was named the Youth Tunnel in praise of the young people's hard-working spirit.

The people were greatly encouraged by the successful completion of the Youth Tunnel and insisted that the whole project be resumed. In 1961, 3,000 peasants returned to the site within the period of a few days, and the worksite was again seething with activity.

But the struggle was not yet over. In three years, Liu Shao-chi and his gang four times issued orders calling

off the project. The Linhsien County Party Committee, however, was not swayed. Work proceeded all the year round, on a large scale during the slack farming season and on a small scale during the busy ones. Labour power was so arranged that both the project and farming were very well taken care of. As soon as a section of the canal was completed, it was put into use. So the project, while still at the construction stage, helped to bring in good harvests, which in turn helped the realization of the project. People in Linhsien often repeat the saying, "When a thousand people go on a trip, they need someone to lead the way." They go on to point out that if the county Party committee hadn't been firm in its leadership, the project would have been abandoned long ago.

Led by the county Party committee, the people of Linhsien overcame one difficulty after another, defied the three-year-long natural calamities, conquered the precipices of the Taihang Mountains and hastened the growth of the collective economy of the people's communes. In the meantime, the national economy as a whole took a turn for the better and the government gave Linhsien another appropriation. Like a tiger given two wings, work on the project gained greatly in speed. On April 5, 1965, the entire 70 kilometres of the trunk canal was completed and went into use.

That year, Linhsien was hit by a drought worse than the 1959 one. In duration and intensity, it was one of the worst in the county's history. From April to October, rain fell in only a few spots. Most of the springs, rivers, rain-water wells and ponds as well as the old reservoirs, channels and ponds dried up. All the people of the county plunged into an intense battle against the drought.

This year, the might of the Red Flag Canal was displayed for the first time. Every area served by it reported a bumper harvest. County statistics show that 61 production brigades and 568 production teams reaped over 200 kilogrammes of grain per mu that autumn, 24 brigades and 196 teams over 250 kilogrammes, 9 brigades and 81 teams over 300 kilogrammes, 4 brigades and 34 teams over 350 kilogrammes and 3 brigades and 26 teams over 400 kilogrammes. Four teams even surpassed 500 kilogrammes per mu.

The target for grain output in China's National Programme for Agricultural Development for areas north of the Yellow River is 200 kilogrammes a mu. Linhsien is north of the river. The fact that so many of its production brigades and teams surpassed this target in a year of severe drought shows clearly the power of the Red Flag Canal. The achievement was a revelation to the whole county, and the people became even more convinced that "Man will conquer nature." Their determination in cutting through the mountains and leading the water in became even firmer.

April 20, 1966 was a day of jubilation in Linhsien. Three branch canals were completed in the wake of the trunk canal. Endless streams of people converged on five meeting sites along the branch canals to celebrate their inauguration. Women in their holiday best, white-haired grannies and rosy-cheeked children on wheelbarrows pushed by robust young men, and other men and women of all ages came from distances of up to a dozen kilometres to be present. Musicians played Chinese clarinets, beat drums and struck gongs with great gusto. As the sluice gates opened, the water poured in, and

cheers of "Long live Chairman Mao!" and "Long live the Chinese Communist Party!" rent the air.

Gaining impetus from the Great Proletarian Cultural Revolution, the people of Linhsien started to construct a series of subsidiary projects in 1968 and 1969. These projects were completed at a much faster pace than before, in a mere nine months.

So, after ten years of arduous struggle, the entire Red Flag Canal network was completed in 1969.

Throughout these ten years, the people of Linhsien, strictly applying Chairman Mao's principle of running all undertakings industriously and thriftily, maintained a spirit of self-reliance. On the worksite, all spending was limited to the essentials. No tools or building materials were bought that could be made by their own hands. Linhsien had many craftsmen, and the county Party committee urged and organized them to contribute their skill and to train apprentices. Without the expenditure of a single yuan, the county now acquired many new processing factories and service establishments.

The Taihang Mountain area has an abundance of stone. The peasants utilized it as building material. The stone blocks used in the construction of the 1,500 kilometres of canals and channels and of their numerous tunnels, bridges, aqueducts, culverts and sluice gates, were all hand-cut by Linhsien masons using hammers and chisels.

Large quantities of cement were required, and at first supplies depended on state allocations. Later, the builders decided to produce their own, and a small cement works was set up. Its output was 25 to 30 tons a day, sufficient to meet the needs of the project. This by-product of the canal project has since become a state-owned enterprise under the charge of local authorities. All its processes have now been mechanized or semi-mechanized.

Lime, which was needed in much greater quantities in the construction work, was also produced locally, and the peasants invented a way of making lime without kilns to meet the requirements of the ever-extending site. They made a mountainous multi-deck "sandwich" of limestone and coal out in the open and then fired it. This new method saved both man-power and fuel. The 150,000 tons of lime used on the trunk and branch canals were all made in this way.

Blasting of mountains was a continuous process, using up enormous amounts of explosives. The first government appropriation was practically all spent on explosives. The builders decided this could not be repeated. Some way must be found to meet the need with their own efforts. They soon found out that the ammonium nitrate supplied by the state as chemical fertilizer could be transformed into a good substitute explosive. The county Party committee asked the peasants to accumulate more farm-yard and green manure so that the chemical fertilizer could be converted to this purpose. Grind-stones reduced the nitrate to a fine powder, which was then combined with other ingredients to produce the explosive. It worked out all right and cost only one fourth of the market price of dynamite.

All building materials and tools were put to the utmost use. When a steel drill rod wore short, it was sent to the smithy to be joined to another. When that one wore out, it was made into a small chisel. When the chisels became too short to use, they were converted into six-faced steel wedges to be used by the masons. When

the wedges were no longer serviceable, they were forged into pickaxe-heads and used until completely worn away.

All waste materials were put to good purpose. For instance, scrap iron was made into tools. A stone hammer made by the builders themselves cost only 20 cents, less than a tenth of the market price of 2.5 yuan! Empty dynamite boxes became a source of valuable supplies: the nails were carefully extracted and re-used, and the wood was made into mortar troughs, carts and buckets.

In short, strict economy became the rule on the worksite. Every nail, stick of wood, piece of scrap iron and tag-end of hemp rope was made to serve a useful purpose. The builders said, "By relying on our own hands and working diligently, we can get everything we want."

The Linhsien people's spirit of self-reliance was also evident in the way they accumulated funds. Of the 47 million yuan spent on the trunk and branch canals, government assistance accounted for only 21.6 per cent. The rest was contributed by the communes and brigades. Of the 20 million yuan spent on the subsidiary projects, the government put in 1.5 per cent and the communes and brigades the remainder.

The amount contributed by each commune or brigade was determined by the amount of benefit it would receive from the completed project. The bigger the prospective benefit, the bigger the contribution made. The contributions were mostly raised in the form of labour power. A commune or a brigade sent an agreed number of peasants to the project, and their labour was counted in workpoints according to a fixed rate. They drew their pay from their own production teams, just like the members doing the farming.

The Masses Are the Real Heroes

"When people are of one mind, they can move Mount Tai." So goes the Chinese saying. And the most important element in the successful completion of the Red Flag Canal was the fact that Linhsien's leadership and people fought as one man.

Resolutely following Chairman Mao's revolutionary line, the county Party committee trusted the masses, relied on them and respected their initiative. The leading cadres were constantly among the masses, sharing their pleasures and hardships and setting an example by working energetically and in a down-to-earth way. The Linhsien people, inheritors of a glorious revolutionary tradition, developed their own revolutionary spirit of daring to struggle and seize victory and made new contributions to the overcoming of poverty and backwardness in their county.

Among the tens of thousands working on the construction site was a strongly-built, middle-aged man with a face darkened by the sun. He was always to be found where hard work was going on, now swinging a sledge hammer to drill blast-holes, now laying stone blocks to build an embankment, or discussing with technicians about the construction of an aqueduct, or carrying heavy rocks, or even mending his comrades' shoes in the living quarters. Named Ma Yu-chin, he was vice-director of the general headquarters of the project and deputy head of Linhsien County. Now he is vice-chairman of the county revolutionary committee. The canal builders affectionately addressed him as Old Black Ma.

Ma had been working like this ever since he was put in charge of the project ten years previously. During the

difficult days of the building of the Youth Tunnel, he worked, ate and slept among the youngsters. He was not a water conservancy expert, but a veteran Communist Party member who had joined the armed revolutionary struggle in the 40's. When Liu Shao-chi and, later, Lin Piao, and their gangs savagely assailed the Red Flag Canal project, Ma came under every kind of attack. But whatever the circumstances, favourable or otherwise, his foremost thoughts were of Chairman Mao's revolutionary line, the decisions of the county Party committee and the demands of the masses. He knew every inch of the county and seemed to carry a map of Linhsien, or rather, a complete map of our whole beautiful motherland, in his mind. He regarded the canal worksite as a battle-field for the realization of the great goal of communism in China. As a commander, he was always working at the toughest jobs, leading the rank and file in charging forward towards the final triumph.

With Old Black Ma as their example, the other leading cadres also identified themselves with the masses, working side by side with them, listening to what they had to say and solving together with them technical problems and those of everyday life. The presence of these good commanders helped to raise the socialist enthusiasm of the builders, who developed a greater drive and became more determined to overcome difficulties in the revolutionary spirit of **"Fear neither hardship nor death."**

One special job involved in the project was clearing away dangerous rocks to prevent possible accidents. Communist Party member Jen Yang-cheng was chosen as leader of the team responsible for this work.

Jen was a well-known blaster. Soon after the construction work began, he worked at the head of the canal

and blew a large piece out of a cliff at one go. The cliff was left deeply cracked, with huge loose rocks jutting out from it. These could be dislodged by strong winds and endangered the lives of the men working down below. Three days went by with the face in this condition and the work held up. Very worried, Jen asked again and again for permission to remove these loose rocks himself. Suspended on a rope, he swung like a human pendulum high above the valley, dislodging the projecting boulders with a crowbar. The leadership later organized a team of 12 men under his guidance to remove every piece of loose rock.

The risks were many, but Jen and his comrades put the safety of others first. Jen was injured on several occasions and his loins were sometimes chafed raw by the lifeline rope, but he never faltered. One day there was heavy snow and the leadership decided that the builders should lay off and rest. Jen thought they ought to keep on with the job, so that the work of hundreds of builders should not be held up once the weather cleared. So, off he went with two assistants. On the worksite, Jen told the two younger men to build a bonfire at the cliff-top to keep them warm while taking care of the lifeline. He himself worked from early morning till noon amid the swirling snow, clearing out loose boulders. When the job was finished and he was lowered to the valley, he was thickly cased in snow. The others rushed to help him untie the rope and get rid of the snow. They assisted him to get into a mountain cave and made a fire to thaw out their almost frozen comrade.

What moved Jen Yang-cheng to take on this task? It is a long story. His name, meaning "nurtured by sheep," refers to his bitter experience in infancy. Drought

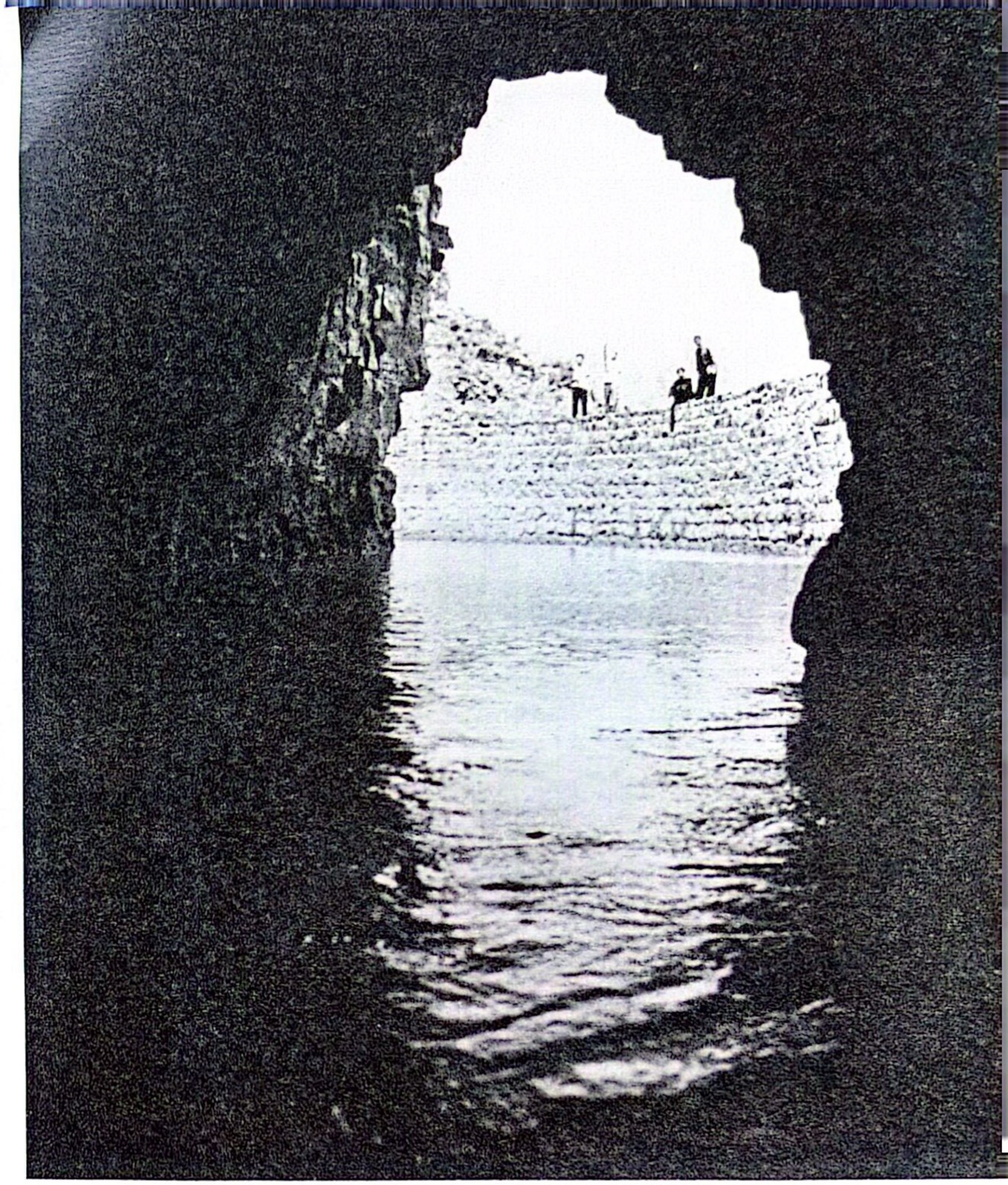
hit the village the year he was born. At the height of the Jen family's poverty and distress, a local landlord forcibly took away their all – two mu of hilly land and a two-room thatched cottage. To escape starvation, his father and two of his elder brothers fled to neighbouring Shansi Province. A third elder brother stayed behind and worked as a shepherd for the landlord. Day after day, his mother, Jen on her back, went to the hills searching for wild herbs to eat. Underfed, her milk dried up, and the baby was soon reduced to a bag of bones. With no other way, his mother and brother took him night after night to the sheep-fold and placed him under the ewe to suck some milk. Without it he would have died. Reared under such circumstances, Jen had a first-hand knowledge of the sufferings of the Linhsien people which made him ready, as a Communist, to give his all, and if necessary his life, to put an end to such hardships.

In the decade of building the project, there emerged a large number of heroic people like Jen Yang-cheng, who feared neither hardship nor death. Numerous peasant-experts and skilled technical personnel also came into being. Rooted among the masses, they worked shoulder to shoulder with them in the struggle for production. This helped enhance their socialist consciousness and increase their vocational knowledge. Integrated into the "three-in-one" groups, which also consisted of leading cadres and rank-and-file workers, they contributed a great deal to the solving of many technical difficulties.

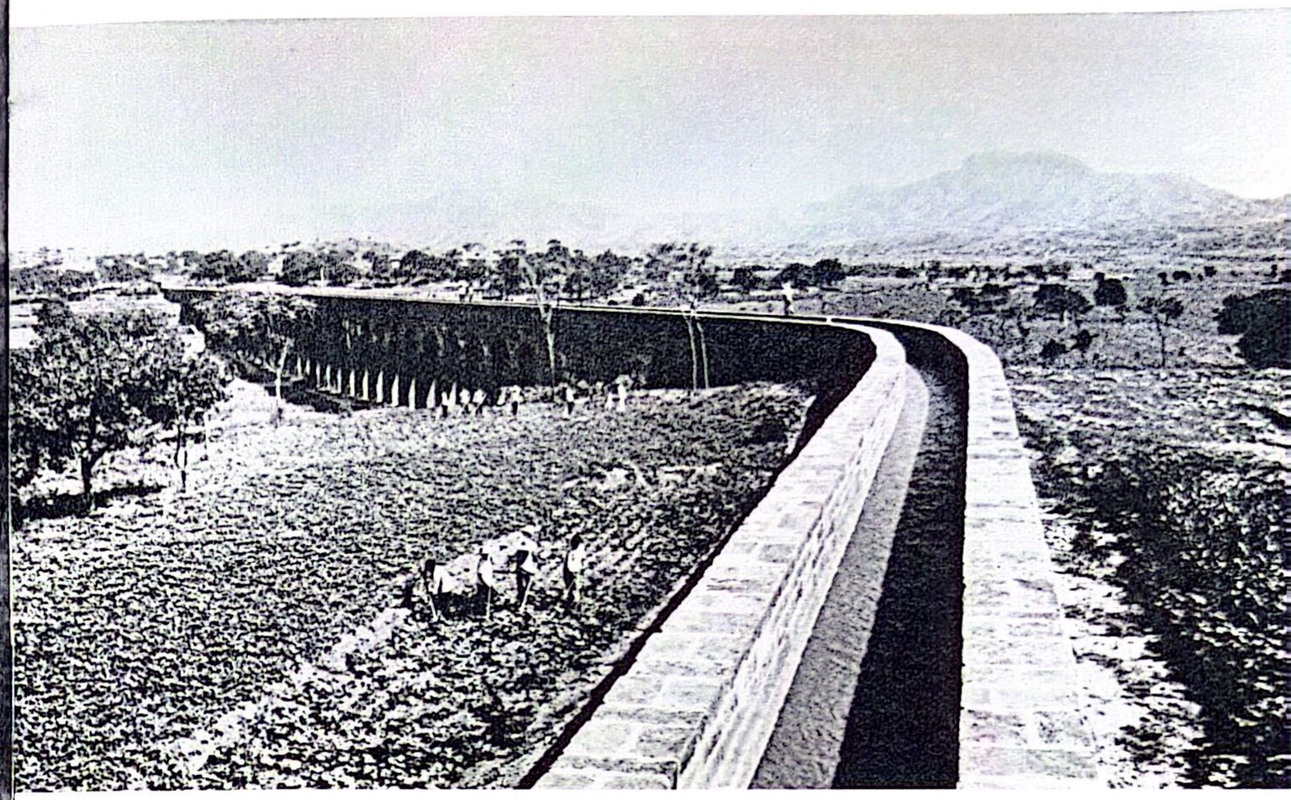
At a place where the trunk canal crosses the Chuoho River at a right angle, the builders put up an ingenious structure known as the "Hollow Dam." It conveys the canal water through an "underpass," namely, two parallel conduits built within the dam, over whose top the river

Bird's-eye view of the canal

Winding through the Taihang Mountains

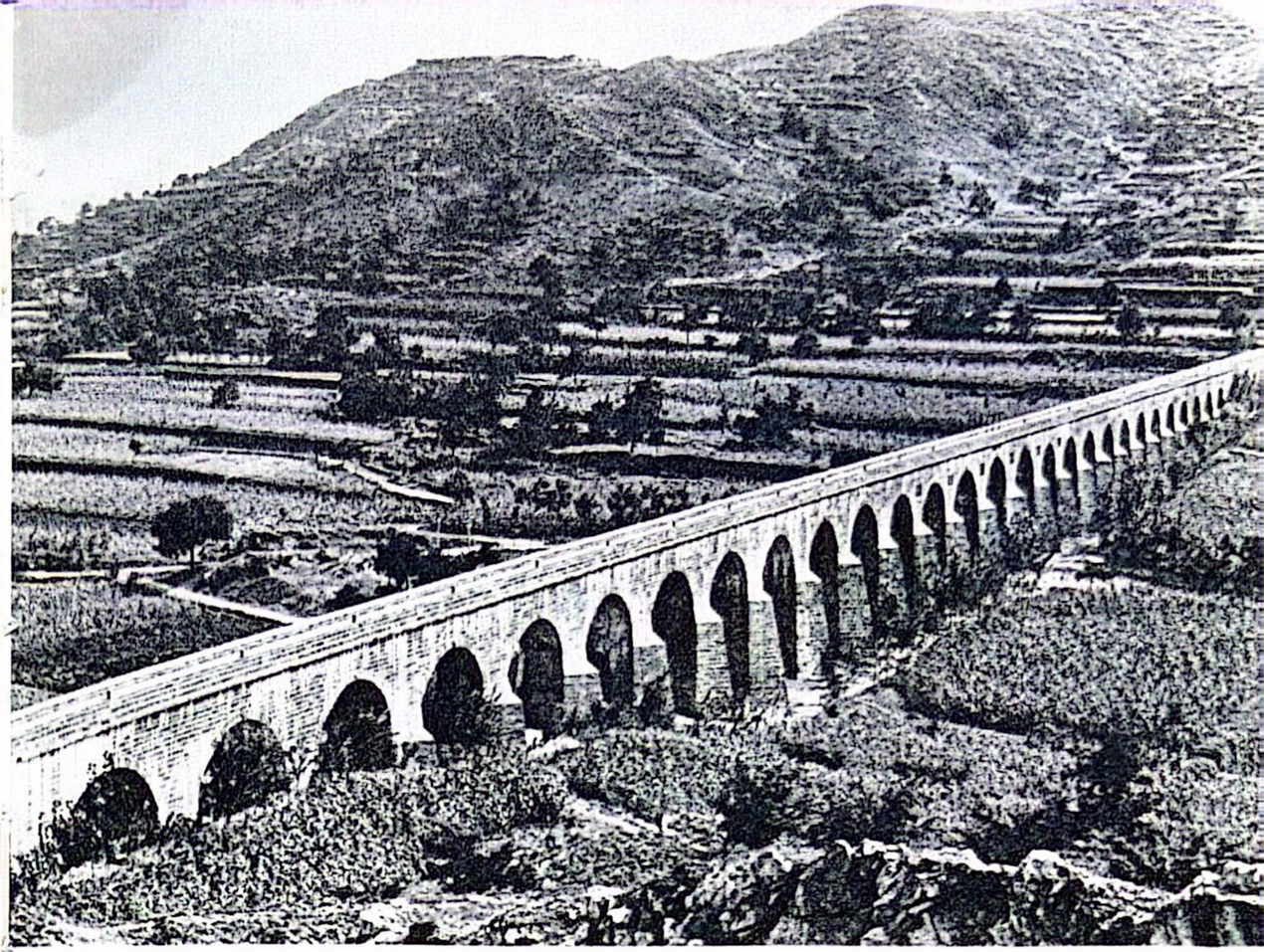


Youth Tunnel



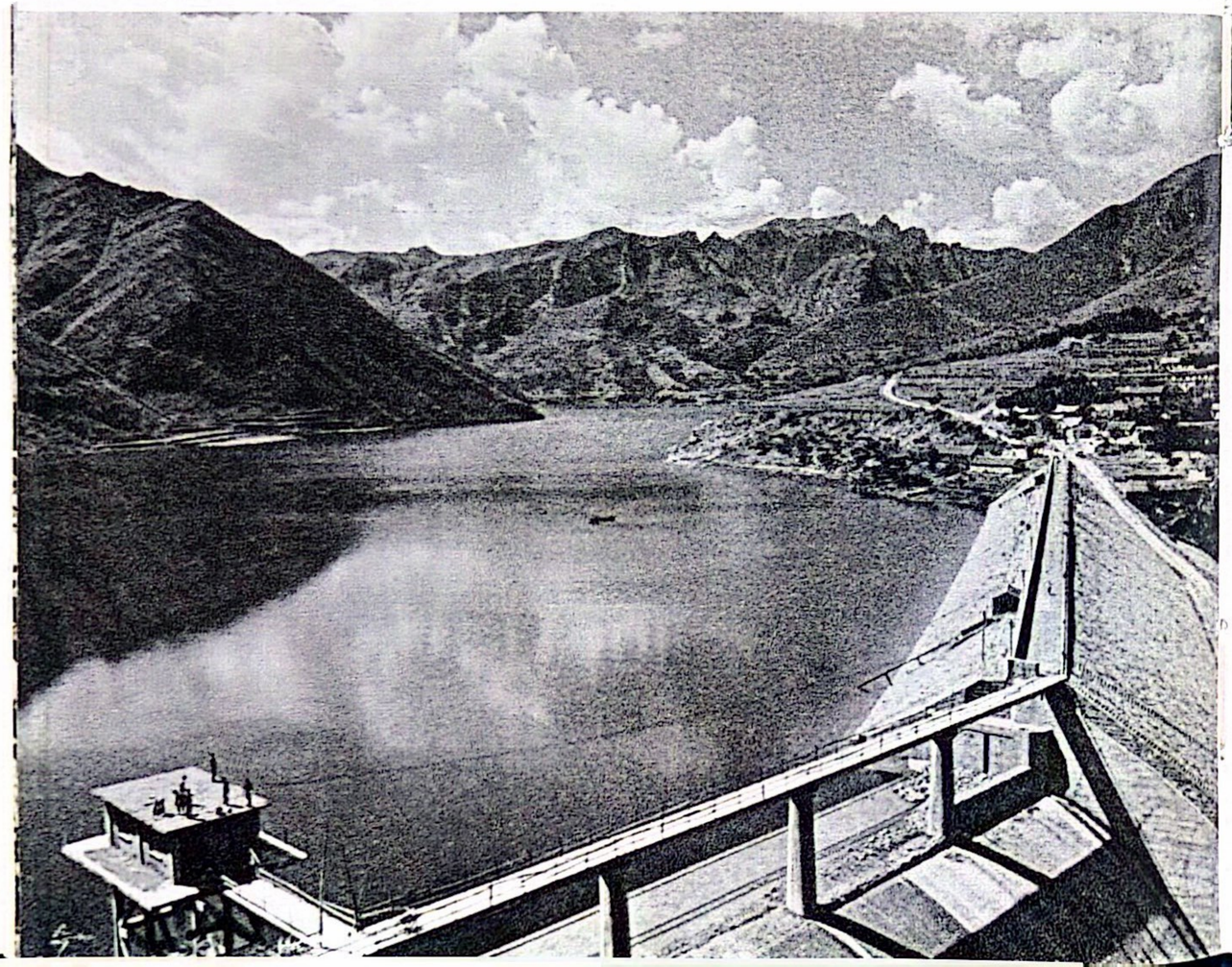
"Seizing Bumper Harvest" Aqueduct

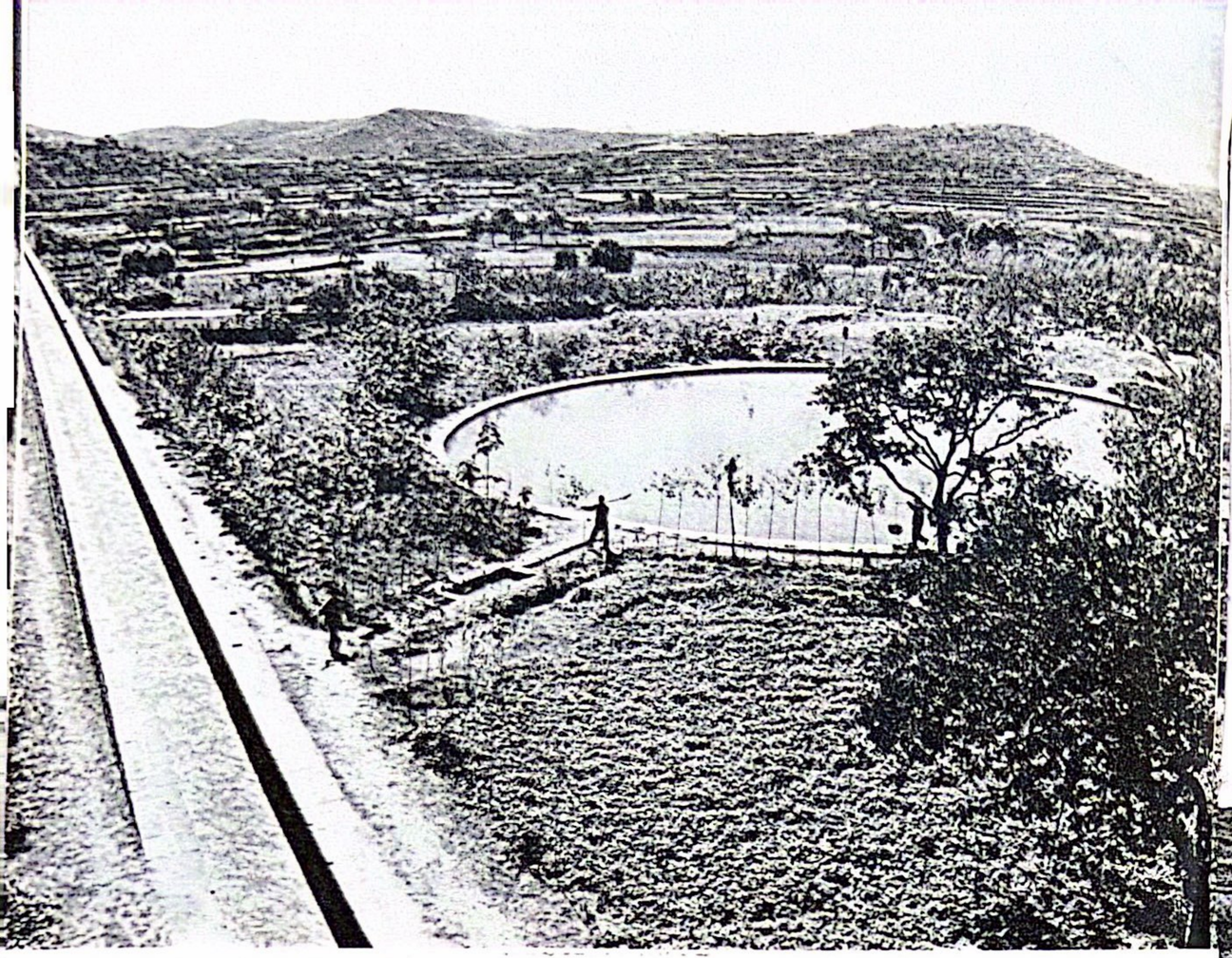
The majestic Trunk Canal



Dawn Aqueduct

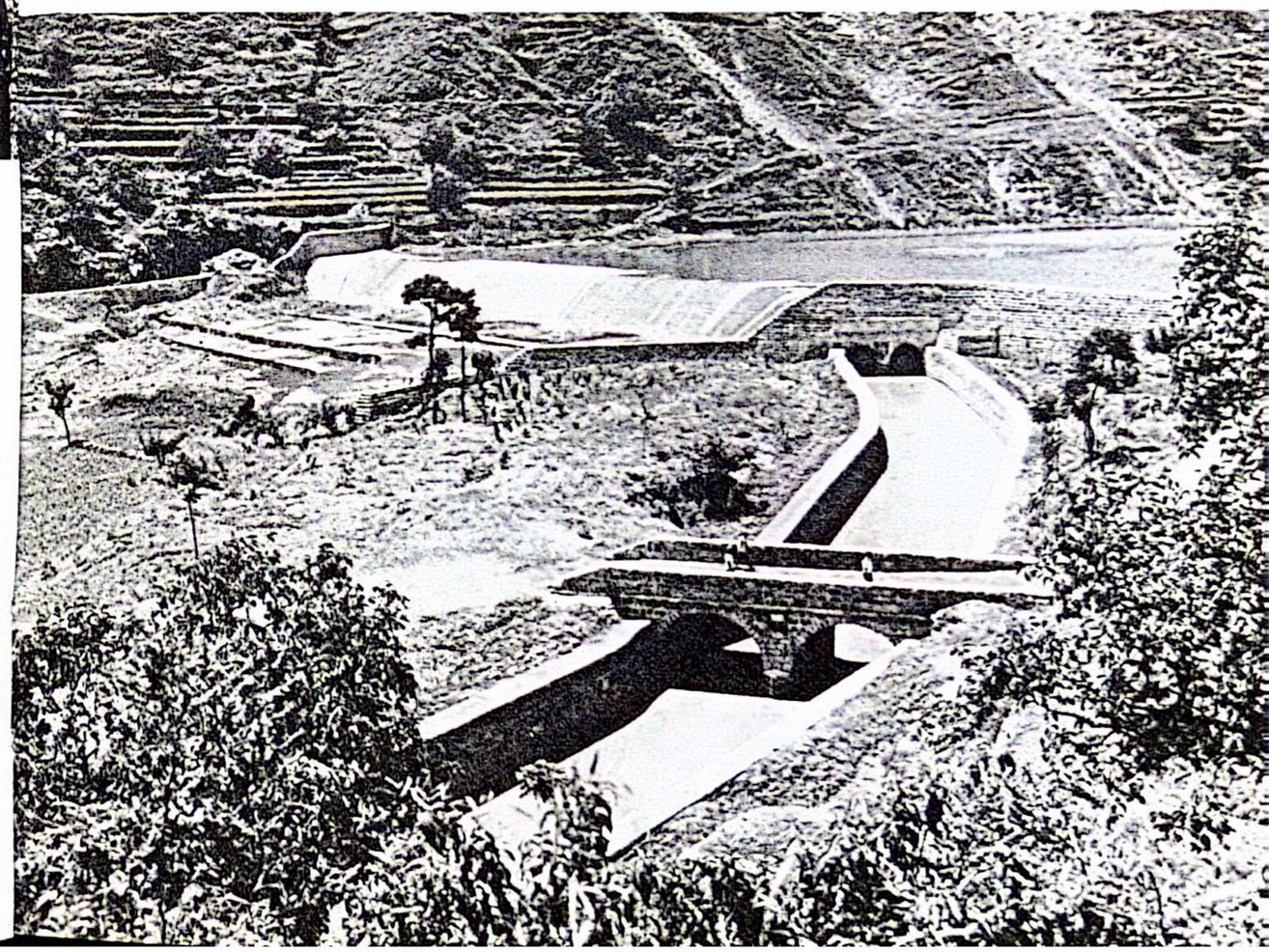
Kungshang Reservoir



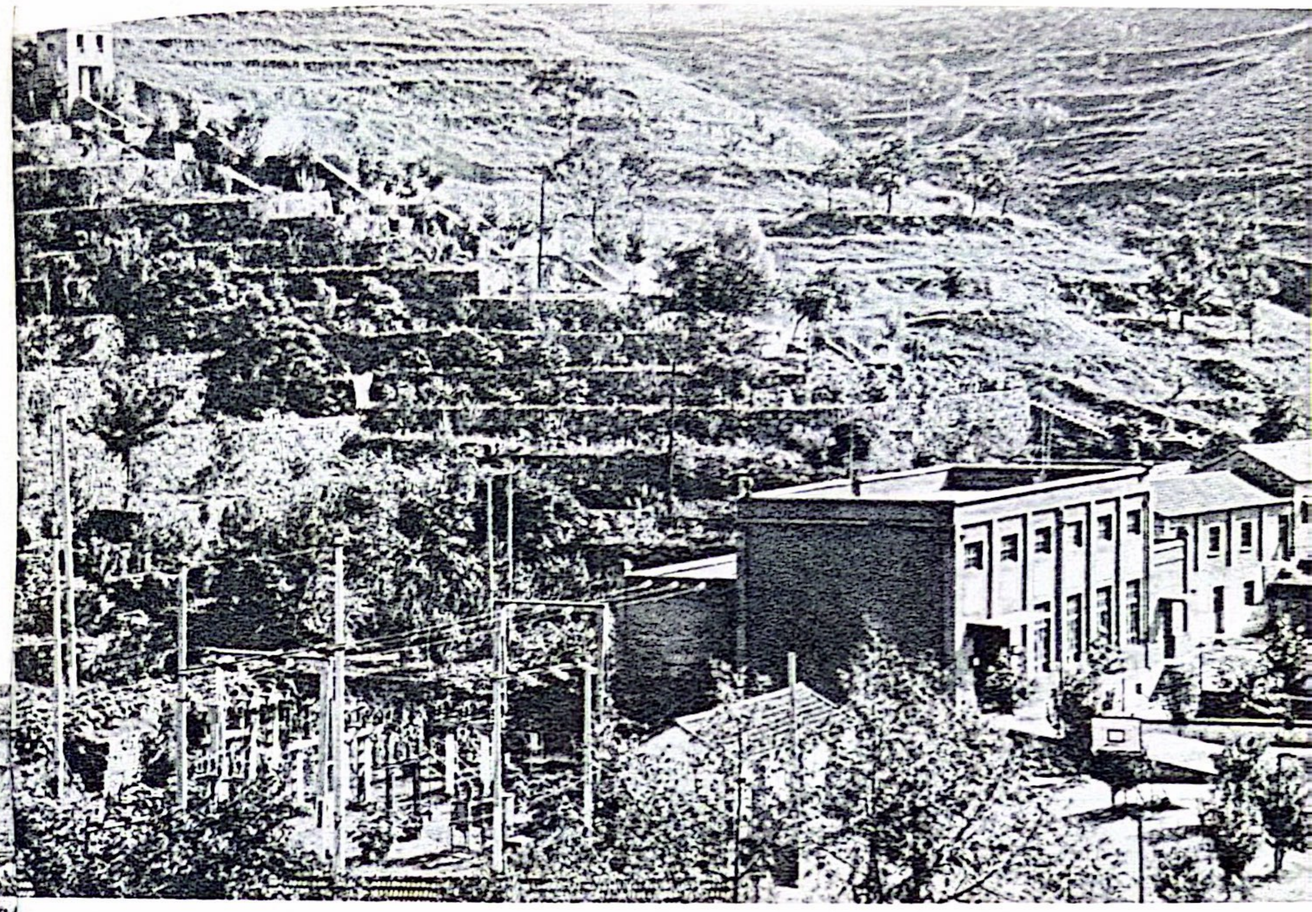


One of the ponds fed by the canal, called by the local people "melons on a long vine"

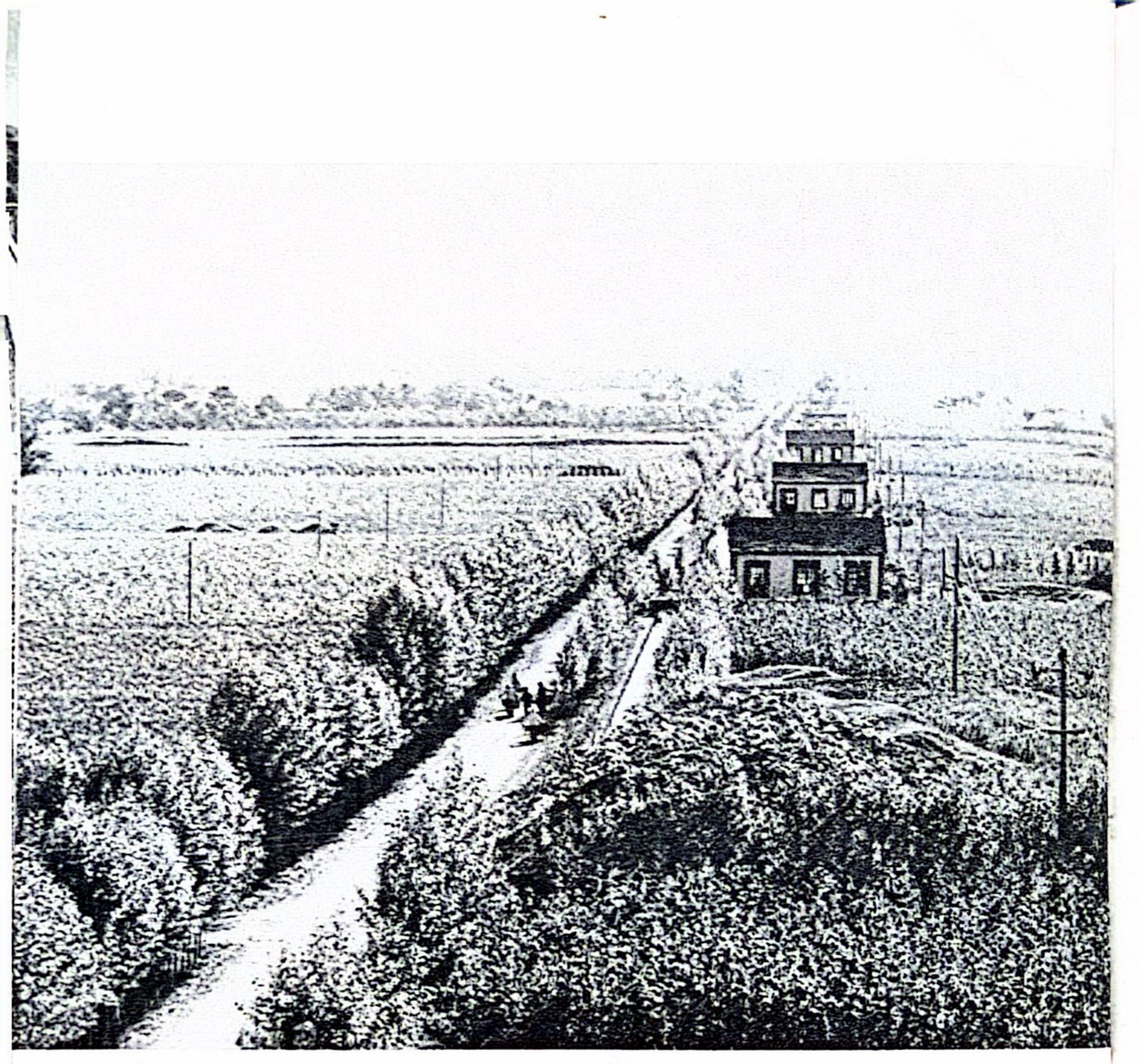
"Hollow Dam"



Taoyuan Aqueduct-Bridge which carries water beneath its road surface



Red Flag Canal Hydro-Power Station with a capacity of 3,120 kw.



Small brigade-run hydro-power stations along the 12th channel on the First Branch Canal

flows without interfering with the canal. This intersection can be seen from the river bank near Paichia Village.

This is how it came to be built.

During the surveying of the trunk canal, the planners ran into the problem of how to contend with the 100-metre-wide Chuoho River at Peishan Hill. The canal had to cross it in order to proceed further south, but this river has a heavy flow during the high-water season, rising to over 500 cubic metres per second at the peak period. What was to be done? To build a 100-metre conduit under the river with reinforced concrete and huge pipes would cost as much as one million yuan, and the state would have to supply the needed materials. So the "three-in-one" survey team gave up that idea and decided to try and work out another method.

In search of facts, the team visited a veteran mason named Yang Wan-jen, who had lived scores of years by the Chuoho River, and many other people. This brought in a lot of information about flood conditions in the past. The old mason suggested that a stone-lined culvert be built on the river bed to channel the canal water across the river. This suggestion gave a clue to the technician Wu Tzu-tai. But he thought a culvert resting on the river bed would hardly be able to withstand the great rush of water during the flood season. However, if a structure with a conduit inside could be built mainly under the river bed to take the canal across while the river water passed over the top, the canal water would not only flow across the Chuoho but there would be no problem of withstanding the pounding of the floodwaters. This idea led Wu to draft a design for the "hollow dam." The experienced mason Yang Wan-jen and others proposed modifications and additions when it was discussed at a meeting of the

"three-in-one" team. The stone structure, 155 metres long, 20 metres wide and with a drop of 6 metres conforming to the original topography, can now be seen athwart the Chuoho River. Its top is level with the river bed on one side. The canal water is diverted southward through its two conduits and the water of the Chuoho flows above. Years of use have testified to the quality and efficiency of the "Hollow Dam," although its cost was only one fifth of that of a reinforced concrete culvert.

Many aqueducts were built in the Red Flag Canal network, but the one over the Taoyuan River on the First Branch Canal is of a special type. It carries water and also serves pedestrian and vehicle traffic. Hence its name, "Taoyuan Aqueduct-Bridge." Built entirely of stone blocks, it has 7 arches and is 100 metres long, 24 metres high and 6 metres wide. The trough through which the water runs is covered with big reinforced concrete slabs to form a road. Along the edges of this aqueduct-bridge are concrete balusters linked with iron chains.

The river winds its way past Taoyuan Village of the Chengkuan People's Commune, where the mountain slopes are steep and the ravines deep. Although dry most of the year, it used to block north-south traffic whenever the mountain torrents rushed down. As the river lay athwart the projected route of the First Trunk Canal running north to south, it was at first planned to build an ordinary aqueduct here. When the local peasants were asked what they thought of the suggestion, many urged that the traffic problem be solved at the same time. They also joined in designing the triple-purpose structure, which allows the river water to flow underneath, conveys the canal water through a trough on the middle deck, and

has a top deck for road traffic. When it was completed, the local peasants sang in praise:

We've led in the Changho water
And built a new road
To replace the natural obstacle
That barred the way for a thousand years.

Speaking of canal builders, the women of Linhsien, too, contributed a great deal. As the folk saying goes, "Women shoulder half of heaven." In the construction of the canal project, women indeed played an important role and proved the correctness of Chairman Mao's words: **"Times have changed, and today men and women are equal. Whatever men comrades can accomplish, women comrades can too."**

Young women swinging hammers, blasting rock or doing masonry work had rarely been seen in China. But it became common on the Red Flag Canal worksite. Communist Party member Han Yung-ti and her women workmates learned to do these jobs.

In 1968, 18-year-old Han and some other young women from her village came as volunteers to work on the canal. Their team had been given the task of tunnelling, but its leader, who refused at first to believe they could handle underground work, asked them to help dig surface channels instead. He agreed to let the girls come on this job only after much earnest insistence. Then, they were given only the easy job of loading and disposing loose rock. Seeing the men working hard with hammers and steel drill rods, all in a sweat, they too applied to do this more taxing job, though not without some misgivings. After all, lacking the experience, it was easy to get hurt either working with the hammer or holding the

drill rod. Some men joked, "What? Hold the rod while you girls swing the hammer? Nothing doing. We want to live a few more years yet." The girls had a discussion among themselves and decided to practise holding the drill rod first. Some of them sustained blows from the hammer on their hands and arms. But they encouraged each other to keep trying and, after some hard learning, became skilled with both hammer and rod.

Having learned to drill blast-holes with hammer and rod, the next challenge was to learn how to emplace and detonate the explosives. Could women do this? Han Yung-ti pleaded to be allowed to try. To encourage the women in their enthusiasm, the leadership agreed after some careful consideration. At her first attempt, Han was asked to light five fuses in a shaft. When the first one began to spark and hiss, she became a bit flustered. When she got to the fourth, she lost her nerve and hurriedly signalled to be brought up. The other girls turned the windlass as fast as they could to lift her up, then, four blasts went off in quick succession. Everyone applauded. But Han, remembering the fifth fuse, felt ashamed and asked to go down again at once. The smoke remaining in the shaft snuffed out her lamp, but she groped about in the dark, and found and lit the fifth fuse.

Han's example encouraged the other girls to learn and master blasting. Though nervous at first, they gradually became skilful and quick to react to all emergencies. They also learned to time explosions so that the blast occurred the moment they had left the shaft. The fame of their team spread far and wide, and soon it became known as the "Iron Girls' Squad."

There are many more such stories. For months and years on end, tens of thousands of canal builders earnest-

ly did whatever was required of them. There was the master mason, not much of a talker, who for six years chiselled the irregularly-shaped rocks into regular blocks. And there was the young man who came to the worksite with the lofty ideal of cleaving the mountains to lead in water, but then noticing that his workmates were wearing shoes which did not really protect their feet, asked for the job of mending them. For years he travelled to all parts of the worksite, carrying his shoe-repair box and serving the builders. These were just two of the many who displayed their lofty communist spirit by selfless devotion to duty. Their names may not be written on any roll of honour, but just the same they had a great share in building the Red Flag Canal.

A suggestion was made to strike badges of one sort or another to be issued to the builders as mementos of their participation. But they refused with thanks, saying, "The Red Flag Canal itself is the best memento." Well said! The huge Red Flag Canal project will always shine in the hearts of the 700,000 people of Linhsien, with the heroic deeds of those who joined in this great nature-changing feat.

Working for a Common Cause

In old China, tragic armed clashes between villages about water rights occurred from time to time. Land then was private property, and the few mu of fields owned or rented by poor and lower-middle peasants provided their sole means of livelihood. Naturally they hoped for good harvests and this required water. Many villages were communities of people belonging to a single clan, and

class distinctions were blurred by clan ties. Landlords and rich peasants fanned selfish, clan and local feelings to stir the poor peasants of one village to fight over water rights with their equally exploited and oppressed class brothers in another. Fight they did, and both were the losers. Some were killed, some wounded, and the villages involved thenceforth became implacable enemies. Meanwhile, the landlords and rich peasants, who owned most of the land, looked on smug and happy to reap profit from their battles.

This cause of so many evils, the private ownership of the means of production, is now uprooted. Living in the time of the people's communes, the peasants are building socialism and acting on Chairman Mao's teaching, **"Be prepared against war, be prepared against natural disasters, and do everything for the people."** Working for this common cause, the villages help each other whenever and wherever help is needed, like one big family, and their way of thinking is entirely different from that of the old days.

As already stated, the Red Flag Canal is an inter-province project, with 20 kilometres of its length running through Pingshun County in neighbouring Shansi Province. The county and provincial Party committees there assisted in the survey work from the beginning by sending over members of their staff to help. This expedited the completion of the job. In Pingshun County, two communes, called Shihcheng and Wangchiachuang, gave up several hundred mu of mountain land to make way for the canal. They also cleared it of trees and bushes. They said, "Our sacrifice of these few hundred mu will enable Linhsien's hundreds of thousands of mu of land to produce more grain for the state. Besides, great numbers of our class brothers in that county will no longer have to fetch water from far away places. This is really a good move, like 'sacrificing a pawn to save a castle' in chess!"

The hospitality a contingent of builders from Linhsien received while lodging in the homes of the members of the two communes was proof of the depth of their class affections. It was stronger than all the water of the Changho River.

Take the Wangchiachuang Brigade as an example.

It's just a mountain village on a small piece of land perched on a huge rock. The arrival of the builders rapidly changed the usually tranquil hamlet into a town humming with activity, where anyone in a hurry had to elbow his way through the crowd. Its 100 households made 230 clean rooms available for the builders. Many of the hosts provided the visitors with mats and blankets. If the communal kitchens ran short of utensils, the women-folk hurried to lend their own. The elder ones made it their concern to visit any builders who fell ill, bringing them gifts of hot noodle soup and new-laid eggs. The builders responded by helping with the household chores and doing necessary repairs as they would in their own homes.

For the passage of the canal on to Linhsien, it was necessary to bore a big tunnel through the rock on which Wangchiachuang stood. The tunnel had to be 240 metres long, and 5 metres both in width and in height. This involved the safety of the whole village, and so the local Party branch held a public inquiry among the villagers to find out their reaction. Their unanimous conclusion can be summed up thus: "Linhsien is a county. We are a small village. The canal will convey water to the whole of the

county. Our small village stands in the way of the needed tunnel. It is clear which is more important. We should make way for the canal." The engineering branch headquarters discussed how to ensure the safety of the village and decided to build two parallel arched tunnels, thereby adding to the roof strength, along with two sluice gates at the western end of the village to control the water flow.

The tunnelling began. The local people and cadres became even more busy, rendering the builders all needed help to bring the water to Linhsien sooner. Many are the moving instances of selfless contributions made by them. Once, while the top of the tunnel arch was being lined with masonry, the roof caved in and immediate timbering was necessary. Cadres of the Wangchiachuang Brigade took the lead in felling nearby trees and hauling them into the tunnel. Many of the villagers assisted, bringing their own timber. Another example was the contribution made by Granny Chang, widow of a revolutionary martyr. Every day found her on the worksite, with a pot of a refreshing drink made of green beans in one hand and a bundle of shoes and shoulder pads she had mended for the builders in the other. She would stay on until the beverage was all served out and the shoes and shoulder pads changed. Then she would collect more mending and happily depart for home. Still another example involved a rain-water well owned by the Wang family, one of the six families living directly above the heading. It turned out that the lower half of this well was in the line of excavation. The well would have to be abandoned and its upper part filled in. When local cadres and a Comrade Kao from the construction authorities went to the Wangs' to talk the matter over, the hostess

Commune members applying fertilizer to paddy-fields that were once arid land

New look of a formerly arid village in Chien-chuang Brigade of Jentsun People's Commune

A fine crop of sorghum

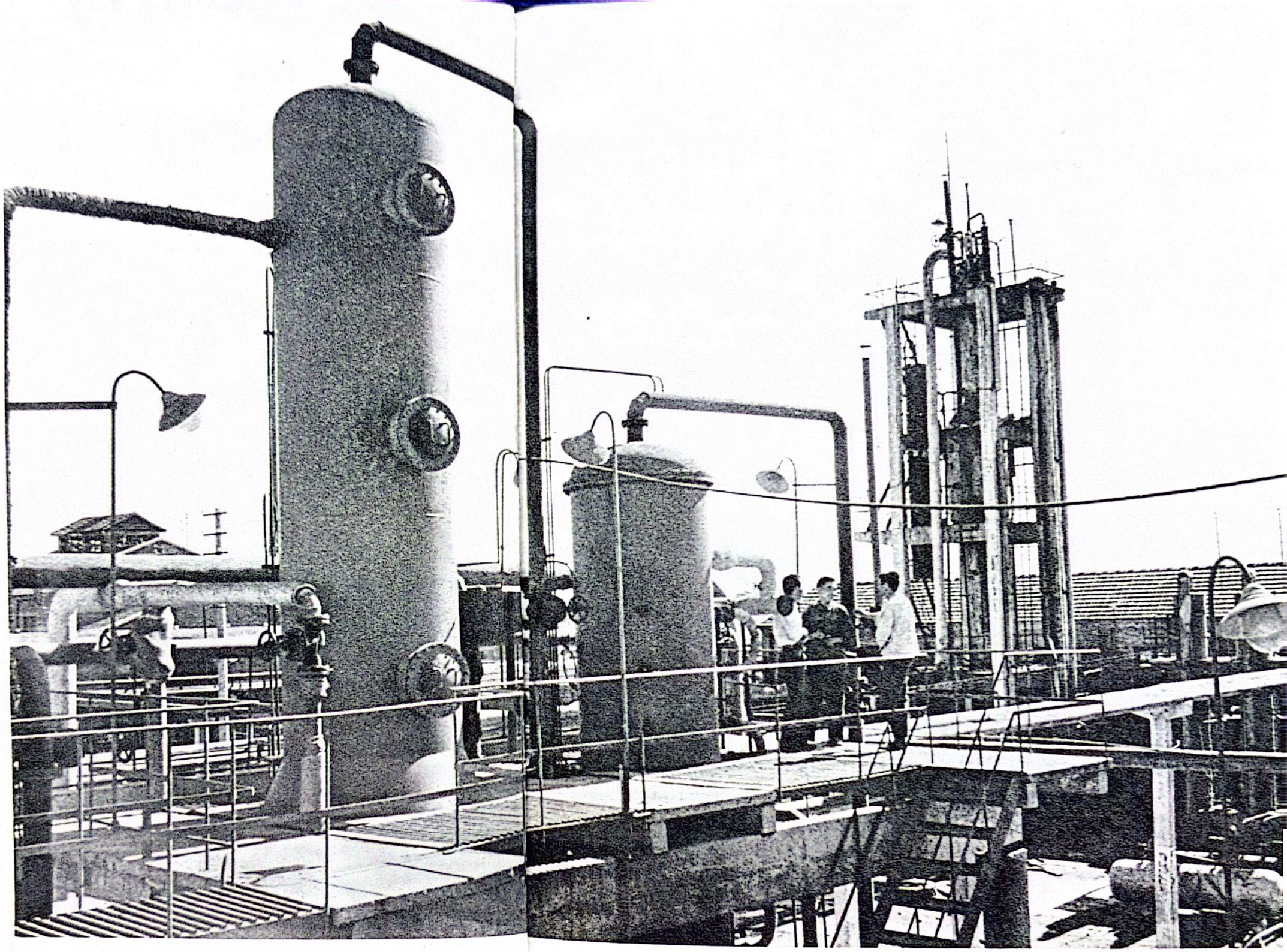
Successful cotton growing

Fish from the reservoir

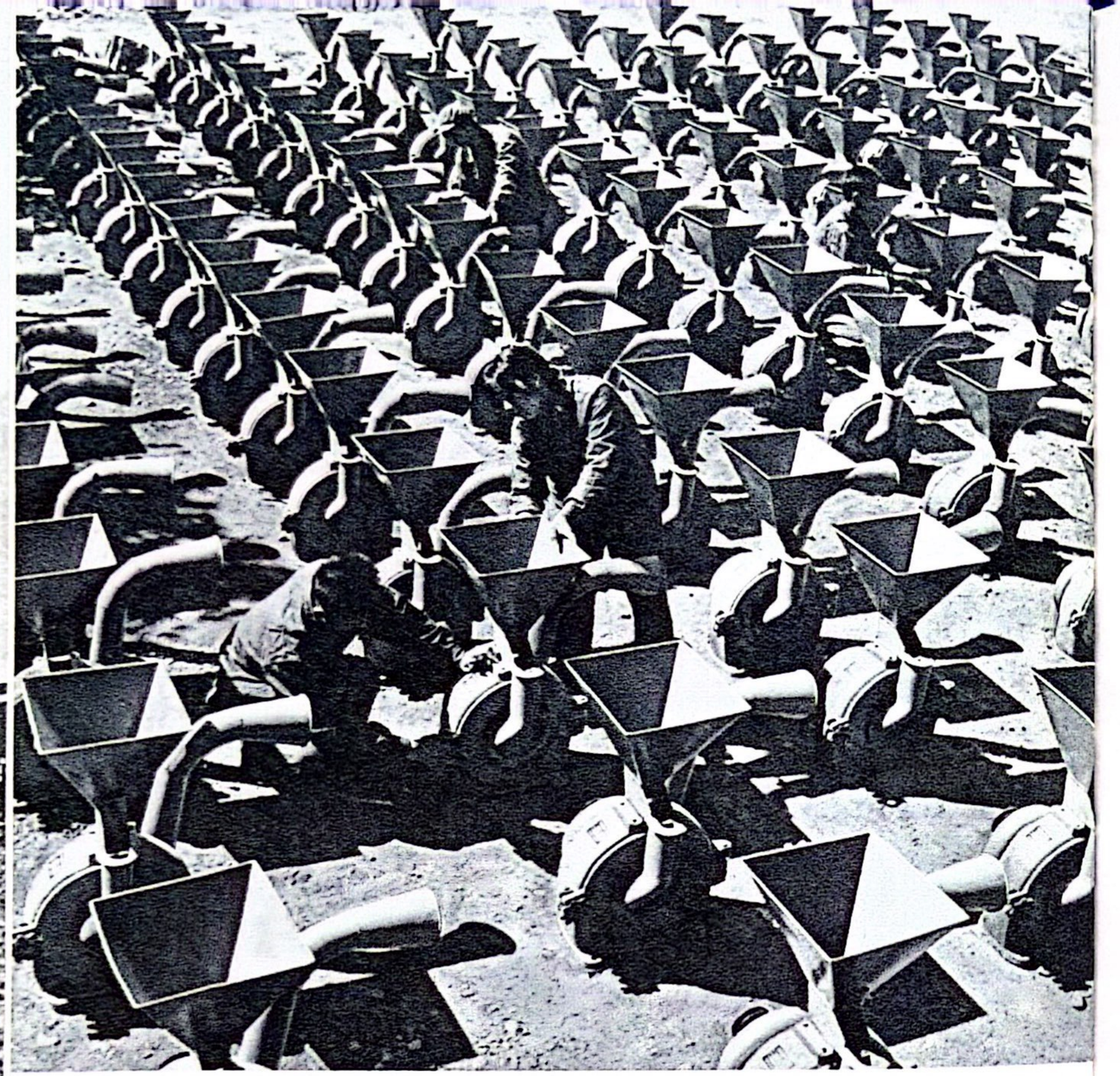
Plenty of juicy peaches from formerly-barren hills

Convenient laundry at the canal side instead of travelling long distances over high mountains to fetch water as in the past

Linhsien Iron and Steel Plant



Chemical Fertilizer Plant



Grain mills made by the Linhsien Machinery Plant

said at once, "It's only a well. Fill it up, that's all there is to it!"

The tunnelling and the work on the sluice gates at the western end of the village progressed rapidly, and the masonry work on the canal at both ends of the tunnel was also begun. One day, a few local cadres and villagers strolled over to the canal site. They discovered that the veteran masons had drilled a big hole through the stone wall of the canal half a metre from the canal base itself, through which water could be diverted.

"Say!" one of the villagers exclaimed, "you're building a channel for our village!"

"Right!" replied a builder. "We're leaving an opening to make things convenient for you."

The villagers spoke all at once to express their gratitude. Not only would the canal to Linhsien be built, but they themselves would not have to go down the steep slopes any more to fetch water from the Changho River far below. Now, this opening the builders had made would provide water for all their fields. All could be converted into irrigated land!

This small mountain village, though near a river, used to do only dry land farming. Now, in addition to their traditional wheat crop, they can also raise rice. This has brought about a radical change in the brigade's production. And with the Red Flag Canal passing through the village, water for household consumption is no longer a problem.

The Wangchiachuang Village is not the only one outside Linhsien itself to benefit from the project. There are many similar openings along the 70 kilometre course of the trunk canal which provide water for nearby fields. The benefited areas, besides those in Pingshun County,

Shansi Province, are in Shehsien County, Hopei Province, which lies north of the Changho River. Some of the fields in the mountain district of western Anyang County, Honan Province, which borders on Linhsien, also get water from the eastern end of the canal.

The Dawn Aqueduct on the third channel of the Third Branch Canal is the longest of its kind in the entire network. It lies in Tingyeh Village in Linhsien, on the border of Tungshui Village, Anyang County. The aqueduct built to carry water to Tungshui Village is 550 metres long and 16 metres high. The two villages disagreed about which of them should do the work. The Tingyeh people argued, "As the aqueduct is inside our boundary, we should put it up." To which the Tungshui people rejoined, "This big construction will benefit us mainly, so of course it should be our responsibility to build it." The matter was settled through concessions being made by both sides. It was agreed that Tingyeh should supply the main labour force, and Tungshui should send a contingent to help.

Another big structure is the "Seizing Bumper Harvest" Aqueduct on the Second Branch Canal. It is 413 metres long, 14 metres high, and 4 metres wide. It has 50 arches and is a really artistic piece of work. The original design provided for a height of 10.5 metres, high enough to convey water to the Hengshui Commune and irrigate the land in the easternmost part of Linhsien. Later, when considering how to supply water to neighbouring Anyang County, another 3.5 metres were added to the designed height. Along the Second Branch Canal alone are three openings which divert water to the mountain district of western Anyang County.

As to the mutual help and concessions made by the communes and brigades of Linhsien County, instances were so numerous that we can cite only a few.

The Tungyao Commune, situated in southeastern Linhsien, is the furthest from the head of the Red Flag Canal and the last to get irrigation water from its First Branch Canal. At one time, builders from this commune were assigned to work on the Second Branch Canal. A narrow-minded type remarked sarcastically, "Water from this branch won't irrigate our land, why waste all that energy?" But he was immediately rebutted, "What do you mean, 'waste energy'? Wherever water from the Changho River is made available in Linhsien, it'll help to increase production for the county, and means more grain for the whole country. Is that 'waste of energy'?"

In this spirit, many communes and production brigades, after finishing their assigned tasks on the project fixed according to the extent to which their own areas would benefit, went to help other units.

On the upper reaches of the canal are four brigades, which, because of their geographical position, have freer access to abundant water. Concerned about the general welfare, they spent three years constructing a separate channel 17.5 kilometres long to convey water directly from the Changho River to their brigades, so as to allow the Red Flag Canal itself to convey more water to communities further along its course. The channel can be seen from the bank of the trunk canal near Hokou Village, several dozens of metres below. Running parallel with the bigger canal and flowing eastward, it symbolizes the deep and lasting brotherhood between communes and brigades.

Harvest

People say, "The Red Flag Canal is a canal of water, a canal of grain, a canal of ever-flowing revolutionary spirit." "When there is Red Flag Canal water, everything comes alive!" These are true words.

The Yuanchiachuang Brigade is in Linhsien County. Its back is against the Wuyun Mountain and facing it is the Hsiho River. It is a typical hill region. Its 1,090 mu of arable fields, large and small, are scattered over one slope, four gullies and five ridges. In the early period following liberation, grain output did not exceed 100 kilogrammes per mu. After agricultural co-operation, and especially after the establishment of the people's commune, grain production went up considerably. But until the Red Flag Canal was built, the average yields still fluctuated between 100 and 200 kilogrammes. How to improve beyond that remained a problem.

One autumn, brigade Party branch secretary Chao Teh-yi made a study of the production in the Chinliukuai Brigade in Huahsien County. He was very much attracted by a piece of land where maize was intercropped with rows of sweet potatoes. Big cobs hung from sturdy maize stalks growing in the furrows, and the swelling sweet potatoes burst through the surface of the ridges. "What a fine sight!" he thought. "There is very useful experience here. If we follow this method of planting, the land will be fully used, and the yield will surely increase." However, his enthusiasm was somewhat dampened when he learned that this way of planting necessitated an abundant water supply and plenty of manure. What Yuanchiachuang Village lacked most was water!

In 1966, as soon as the Red Flag Canal began to supply water here, Chao Teh-yi led the commune members in scientific experiments on intercropping. During the first year, they planted maize between the rows of winter wheat. After the wheat harvest, they intensified the cultivation of the maize, which, in the autumn, scored an average yield of 324 kilogrammes per mu. The harvest was half a month earlier and the yield 20 per cent more than that of the late maize planted after the wheat harvest. In the second year, they intercropped the maize with sweet potatoes. A two-mu experimental plot yielded 802 kilogrammes of the former and 2,640 kilogrammes of the latter. This was a very big achievement, and thenceforth intercropping was gradually adopted. Now, 95 per cent of the arable land of the brigade is intercropped.

After the completion of the Red Flag Canal, in order to develop initiative in the use of water and bring its benefits into full play, the Yuanchiachuang Party branch led the masses in building a small reservoir with a capacity of 400,000 cubic metres. They also constructed over 8,000 metres of irrigation ditches in the fields as part of the Red Flag Canal network. In this way the greatest portion of the brigade's arable land reaped the benefits of irrigation. Then, attention was directed to the improvement of seeds, rational close planting, scientific field management, deep ploughing, land levelling, pig breeding, storing of farm manure, afforestation and such measures. Three winters went by in levelling rugged land into terraced fields. Past difficulties in the supply of water had made pig breeding almost impossible. But now this brigade of only 263 households has over 600 pigs. With the increased supplies of pig manure, augmented by other stable

manures, it is possible for each mu of land to be fed with 15,000 kilogrammes of compost manure.

The brigade's grain production increases every year. The average yield per mu in 1972 was more than 500 kilogrammes. Besides overfulfilling the sales quota to the state every year, the brigade has 92,000 kilogrammes of collective grain in reserve. The yield target planned for 1975 is 650 kilogrammes per mu, and the brigade is steadily working to this end. It also runs a number of subsidiary occupations, from which the annual income is 60,000 yuan. The commune members' standard of living is steadily improving, 80 per cent of them have money in the bank and every family has a stock of surplus grain. This poor mountain village of bygone days, where "Drought means sorrow, waterlogging means sorrow too, and even seasonable weather brings no harvest," has now become a granary, where good harvests are assured even in years of drought or excessive rain.

The changes in Yuanchiachuang Brigade are representative of what has happened throughout Linhsien County. Indeed, the Red Flag Canal has not only brought the benefits of irrigation to land drought-stricken for centuries, but has revolutionized agricultural production. Formerly, the problems of what crops to plant, which strains of seeds to use, and how to plant them, had to be studied from the point of view of ability to withstand drought. People had to plant drought-resistant, low-yield crops. Now, the supply of water has created conditions for the popularization of fine strains of seeds and the planting of high-yield crops. Linhsien County has introduced, cultivated and popularized various fine strains of seeds. Even paddy rice, never before planted in this county, has begun to "settle down" there. With the completion of more and more subsidiary projects, the irrigated area has steadily been enlarged, the area planted to low-yield crops has decreased and that planted to high-yields has increased year after year.

The Red Flag Canal has relieved the greater part of the fields from the menace of drought, people no longer have to fetch water from afar, and much labour power has been liberated for intensive cultivation and scientific farming. The whole county has vigorously tackled the job of levelling the fields, thus bringing irrigation to more land. With an abundance of water, the county has grasped another basic task, manure supply. Many communes and brigades have set up specialized teams, which have tapped new sources of manure, raised its quality, and combined the effective use of water and manure to guarantee steady, high yields. In places where conditions permit, two crops a year have been planted instead of one. Single cropping has been replaced by intercropping, which is now extended to over 600,000 mu over the whole county. Rational close planting has been popularized and scientific field management carried out. In the past wheat was never watered, the situation then being "Man plants, but heaven decides the harvest." In the early period after liberation, one mu only yielded about 55 kilogrammes. Now wheat fields are watered five or six times during the winter and spring seasons. In addition, the strains of seeds have been improved. The result is that the highest yield per mu now reaches 380 kilogrammes, a five or six-fold increase. All these measures have greatly improved agricultural production in Linhsien County. In the past, the county needed over 10,000 tons of grain from the state every year. After the people's communes were set up in 1958, it began to be self-sufficient. Now, after providing

its own needs, it sells 22,500 tons of food grain to the state every year. The county itself has 40,000 tons of collective grain reserves.

Afforestation has also made great progress. In the past, the peasants, their hands full in the struggle against drought, had no time nor energy left to transform the barren mountains and ridges. Even when trees were sometimes planted, the survival rate was low because of lack of water. Now, many production brigades and teams have special groups for tree-planting. Some of these groups have blasted away rocks to clothe the barren mountains with greenery. Some have removed stones and added new earth to change old, dry river beds into apple orchards. During the process of construction of the Red Flag Canal, commune members began carrying out planned afforestation. Where they dug the canal, they also planted trees. They termed this "making the canal bring the forest in its train." With water from the Red Flag Canal, the whole mountainous area is on the way to becoming a world of forests. Linhsien means "Forest County," and is becoming such in fact as well as in name.

The Red Flag Canal has also created favourable conditions for the development of vegetable gardening, animal husbandry, and fisheries. Many production teams are raising ten times as many pigs as in the past. In some collective pig farms and commune members' homes, canal water is led right into the pens for the pigs to drink and to flush out the sties from time to time. This also helps manure accumulation. The changes in vegetable growing are even more striking. Formerly, this county generally did not grow vegetables, with the exception of a few production teams which had better water supply. Now nearly all the communes and brigades have vegetable

gardens. People grow what vegetables they want and eat the ones they like. A favourite topic of conversation now is that fresh-water fish are being bred in most of the small reservoirs and ponds along the canal. In some of the reservoirs they are quite big and weigh seven to eight kilogrammes. To raise fish and eat them is indeed something new in the lives of Linhsien's people!

Making use of the water drops along the canal, the people of Linhsien have built many hydro-power stations for the first time. The largest is the Red Flag Canal Hydro-Power Station at the watershed. It has two sets of generators, which combined have an installed generating capacity of 3,120 kw. Most of the power stations, however, are small ones built by communes or production brigades. Along the 12th channel on the First Branch Canal there are 22 of them. Although each has an installed capacity of only 30 to 40 kw., they are very popular with the peasants. For it does not take much man-power and money to build such units, and the electricity they give, though little, is enough to work a brigade's pumps and machines for grain processing and other similar tasks. They also provide lighting in the homes of the members.

Water and electric power have enabled Linhsien to develop its industry. It now boasts of over 30 county-run small-scale enterprises producing coal, iron and steel, chemical fertilizers, cement, machinery, textiles and black-light insect traps. These enterprises mainly serve agricultural production. They have already turned out many machines and other products necessary in the people's communes.

The Red Flag Canal is providing the people of Linhsien with tremendous material benefits. But even more important is the inexhaustible spiritual wealth it has

brought them. The water of the canal may not directly reach every village in the county, but the spirit of its pioneers – self-reliance, hard work, perseverance and defiance of difficulties – does. When faced with a rigorous job, people here often find themselves using the construction of the canal as their standard. Some say, "We even managed to build that canal; so this job's really nothing." Others say, "This job is tough, but it can't be harder than digging that canal. Let's get going!" Because of this spirit, the people in different parts of the county are conquering nature in the ways best suited to local conditions. They continue to win new victories.

The Tumen Brigade, 15 kilometres southeast of the county seat, is situated atop a stone hill, and everything in it is made of stone – houses, roadways, tables and partition walls. This village was formerly bone-dry, having neither underground water nor a spring. On two occasions the local folk dug ponds and sank wells, hoping to be able to store rain water. But the water seeped away. Losing confidence, they resigned themselves to fetching water from afar.

The beginning of the Red Flag Canal project jogged them into thinking again on this vexed question. It was obvious that the project would not help them, because its water could not reach their hilltop. What should they do? Were they powerless to do anything? No! These people said that they, too, would rely on their own efforts and solve their water problem.

The brigade's Party branch gave prompt support to their view. Wang Yin-hu, the secretary, had long discussions on the matter with other members of the branch committee. The only available water was that which fell from the sky. They decided to try ponds and wells again

to act as catchments. Their previous setbacks were mainly due to failure to bring the masses' initiative into full play and carry out the job well and thoroughly. This time, they decided to follow the example of the canal builders, work with a will and brook no failure.

The Party branch called upon the production teams to dig ponds and wells to store the rain water for dibbling-in and watering young plants during droughts. They also asked the commune members to sink wells for household use and put an end to the fetching of water from afar.

A mass movement for the sinking of wells ensued. The quiet hill village became a scene of hustle and bustle, resounding with the thunder of explosives, chanting of work songs and clanging of hammers against steel drill rods.

At night, when people in other villages had long gone to bed, Tumen still rang with a noisy clamour; its inhabitants were sinking wells for family use.

The well-digging job was an arduous one, especially for the hundred and more families living on the eastern side of the hill, where the houses were built on layers of hard rock. But the people persisted – the canal builders had managed to excavate the Youth Tunnel, so why couldn't they sink wells at Tumen? Wang Tao-yu, a veteran Party member and activist during the land reform, was the first to take up hammer and drill rod. The rock was hard as iron, and each hammer blow left only a white mark on it. After a few nights of hefty pounding, Wang's arms became swollen. His wife was worried and beseeched him to give it up. "No," he answered. "A Communist never yields to difficulties!" So in the daytime, he continued to dig ponds with the other team members, and in the evening, he was busy sinking a well in his own

courtyard. When the opening was man-deep, he began using small amounts of explosives to help with the excavation. In two years, he had succeeded in sinking a well 10 metres deep and 4 metres in diameter at the mouth, able to hold over 100 tons of water. Following Wang's example, every other family on the hill began digging its own well. The sound of blasting echoed constantly, like firecrackers at the New Year.

After several years of hard digging, 750 wells (including 200 private ones) and 7 ponds were completed on this hill of rock. Although insufficient to turn dry land into irrigated fields as the Red Flag Canal has done, these wells and ponds hold sufficient water for dibbling and watering young plants on all the brigade's land during times of drought. The members no longer needed to go a great distance to get water for cooking and washing. A severe drought hit the county in 1965, but the brigade still reaped a bumper harvest, just like brigades benefited by the canal. So Tumen soon became the example to all the hilly villages which lacked water supplies.

If in Tumen the spirit of the Red Flag Canal manifested itself in ways akin to the saying, "Continuous dripping wears through the stone," then in Kuochiayuan, a brigade to the west of the county seat, the process recalled another, "Trickling drops make a river." While Tumen's water source was the sky above, Kuochiayuan's was the trickle from the crevices of the mountain rocks.

Most of Kuochiayuan's fields are half way up the Taihang Mountains, far out of the reach of the Red Flag Canal. But the project set an example for the members of this brigade too, who decided to seek water self-reliantly from the mountains. The Party branch committee members led the peasants uphill and downhill in a thorough

search for possible sources. They discovered 20 trickling springs. The water from the springs dripped very, very slowly, so they built a retaining catch-pool beneath each one to retain it. Then, in the course of three full years, they completed a 25-kilometre channel connecting these pools. When they want to irrigate the fields, they let out the water from all the pools. People call this "banking petty cash to get a lump sum." By this method 700 of the brigade's 1,000 mu of land have been turned into irrigated fields.

Small as they are, these springs play a big role in raising Kuochiayuan's production. The output of grain per mu in this mountain village north of the Yellow River reached 460.5 kilogrammes in 1971, 60.5 kilogrammes more than the target set by China's National Programme for Agricultural Development in areas south of the Yangtse River, which is the best part of China for agricultural production. Yet, the people are not satisfied with the successes they have already achieved. The brigade's Party branch has a plan to build two small reservoirs to retain the water rushing down the mountainside. The water from the reservoirs will in the near future join that from the trickling springs in irrigating the fields of Kuochiayuan, thus ensuring still more and bigger bumper harvests.

It is not in Linhsien alone that the spirit of the Red Flag Canal is to be seen in action. Every year, thousands of people from all parts of China visit the canal and learn from the revolutionary spirit which inspired its construction. The force of example is incalculable. The Red Flag Canal will continue to exert it throughout China, giving the peoples of all her nationalities a new impetus to overcome difficulties in socialist revolution and construction.

红 旗 渠
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ERRATA

On the sketch map in front of the pamphlet, in the titles "Hero Branch Canal" on the west, and "Chipei Branch Canal" and "Chinan Branch Canal" on the south, the word "branch" should be deleted in each case.

In the middle paragraph of p. 2, the last sentence but one should read, "Furthermore, the Red Flag Canal links up with existing smaller canals and waterways into a still larger network which can irrigate 600,000 mu of farmland, two thirds of the arable land of Linhsien."

The second sentence on p. 60 should read, "In two years, he had succeeded in sinking a bottle-shaped well 10 metres deep and 4 metres in diameter at the bottom, able to hold over 100 tons of water."